American Gas Association MONTHLY

Gas Has Banner Year in 1939

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Future Possibilities of Gas

•

Appliances Improved for 1940

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Reaching Low-Use Customers

•

Air Conditioning Sales Plans

January 1940

VOLUME XXII NUMBER 1

AMERICAN GAS ASSOCIATION
420 LEXINGTON AVENUE
NEW YORK, N.Y.

WALTER C. BECKJORD
PRESIDENT

January 1, 1940

To Fellow Workers in the Gas Industry:

The American Gas Association is an opportunity for people to cooperate on common problems to their mutual benefit, or, to put it another way, it is a means to improve knowledge and fitness on the one hand and to interchange experiences and views on the other hand. That being true, and I know from personal experience that it is, I firmly believe every person in a responsible position in the gas industry should be a member of the Association and, what is more important take advantage of the membership. It is our individual obligation to do something for our industry.

Membership in any worthwhile association is as valuable as a member makes it. He can be satisfied in being on the rolls and receiving mailings. Or, he can make full use of the services available to him and participate in the activities of the Association. If he does the latter, membership proves to be invaluable. It has been to me.

If you are a passive member may I urge that you make a resolution for the New Year to become active? If you are not a member may I invite you to become an active one? I will gladly send you an application blank.

With all good wishes for the New Year, I am

Sincerely yours,

Walter C. Beckjord

President

American Gas Association MONTHLY

CONTENTS FOR JANUARY 1940

Heartening news for the gas industry is contained in this issue. President Beckjord's review of the industry's progress during the past year shows conclusively that gas has gained. More customers, more sales and greater revenues attest to its popularity and make a fine foundation for the new year. . . . Another harbinger of future success is the renewed interest in organized research. It has unlimited possibilities, not a few of which are pointed out in Mr. Schmidt's timely article. We must have research, or else, is his urgent counsel. . . . As for appliances, our industry is out in front and setting a terrific pace. Mr. Teller, of our Laboratories, throws light on some of the more recent and significant developments. . . . Another encouraging factor is the organization of a national sales campaign to make summer air conditioning synonymous with gas air conditioning. Herein you'll find the framework of a far-sighted program. . . . What are they thinking about gas ranges? You can probably guess, what with CP ranges on the market, but Arthur Hirose, reporting for an independent agency, makes it unanimous. . . . It all adds up to an optimistic outlook for a happy and prosperous 1940.

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A thing of beauty is this picture of a three million cubic-foot holder of the Binghamton Gas Works—the first photograph to win a $5.00 award in the contest for MONTHLY frontispiece illustrations. Taken by Helen Ace, of Johnson City, N. Y., it won first prize in the Binghamton Chamber of Commerce Industrial Photographic Contest.

American Gas Association MONTHLY

JAMES M. BEALL, *Editor*

GAS ON THE MARCH
.... A Year of Outstanding Achievement

By WALTER C. BECKJORD

President, American Gas Association

THE gas utilities of the United States continued their record of progress and expansion during 1939.

Manufactured and natural gas companies, supplying towns and cities with a population of almost 82,000,000, served a total of 17,548,000 customers, representing the largest number of consumers ever connected to the mains of the industry and an increase of 376,000 over the year 1938. Of these, 10,100,100 were served by the manufactured gas industry and the remaining 7,447,900 were served by the natural gas industry.

Revenues of the entire industry, both manufactured and natural, aggregated $817,137,000, a gain of 5.2 per cent over the preceding year of 1938. The natural gas companies grossed $449,073,000, a gain of 7.8 per cent for the year, while revenues of the manufactured gas companies were $368,064,000, as compared with $360,494,000 in 1938, an increase of 2.1 per cent.

Sales of manufactured gas for domestic uses, such as cooking, refrigeration, house heating, water heating, etc., amounted to 249,367,000,000 cubic feet, an increase of 1.8 per cent for the year. House heating sales registered a gain of 15.9 per cent. The sales of natural gas for domestic uses registered a pronounced upturn, rising from $352,-964,000,000 cubic feet in 1938 to 376,613,000,000 cubic feet in 1939, a gain of 6.7 per cent.

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Sales of natural gas for industrial purposes rose from 589,398,000,000 cubic feet in 1938 to 655,389,000,000 cubic feet in 1939, an increase of 11.2 per cent. Sales of manufactured gas for industrial purposes showed an even greater upturn rising from 47,398,000,000 cubic feet in 1938 to 55,645,000,000 cubic feet in 1939, an increase of 17.4 per cent.

Preliminary estimates indicate that the total production of natural gas in 1939, including amounts used in the manufacture of carbon black and for field purposes, reached a total of 2,200,000,000,000 cubic feet. Approximately 192 billion cubic feet of natural gas were used as fuel for generating electric power in 1939. This was an increase of nearly 13 per cent over the previous year.

Gas companies continue to inaugurate more favorable rates for house heating through central plant burners and equipment. It is estimated that the total number of gas central house heating installations connected to the lines of all United States gas companies in 1939 amounted to 900,000. In addition there were approximately 1,600,000 dwellings heated by unit heaters, space heaters, floor furnaces, etc., giving a total of more than 2,500,000 homes in the United States that are heated by gas.

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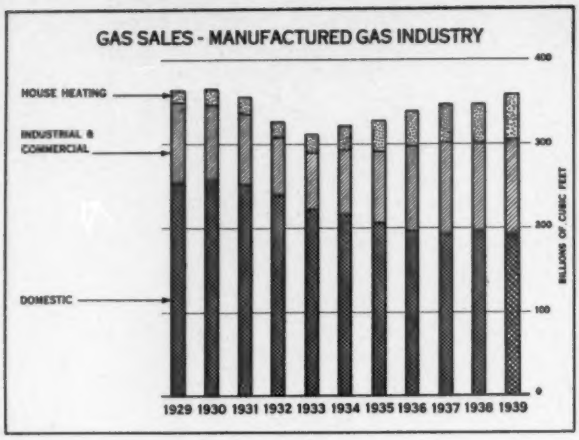
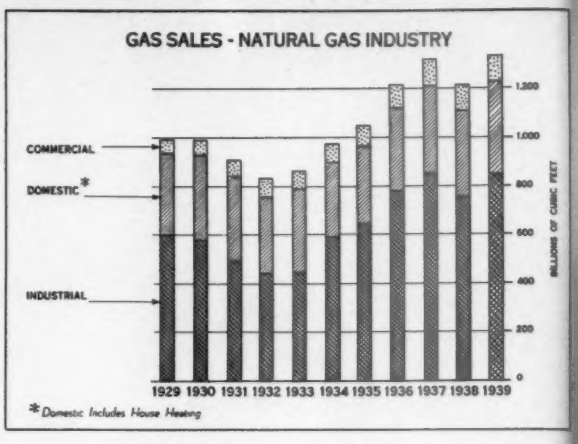
In recent years, the gas industry has supplemented the substantial amount of research conducted by gas appliance manufacturers by a vigorous and well-planned program of research and development through the American Gas Association. Even better and more efficient gas equipment will shortly be available, which should serve to enhance the competitive position of gas.

Gas is also receiving increased recognition in the air-conditioning field, where control of humidity as well as temperature is required. In order to obtain acceptance of gas-using equipment by the air conditioning trade, an organized campaign of engineering education will soon be addressed to the air conditioning industry by the gas industry. This will be augmented by a national sales campaign to acquaint the public with the advantages of gas air conditioning. Details of this campaign are outlined in an article elsewhere in this issue of the MONTHLY.

The use of gas for commercial and industrial purposes throughout the country is growing rapidly in volume. New outlets are presenting themselves in this branch of the industry. Recent marked changes in materials which go into





dwelling structures calling for more use of structural steel, glass, brick, synthetic stone, metalized wood, fabricated steel and concrete in home construction are resulting in a correspondingly greater demand for use of gas in the production of these products.

In the field of industrial utilization new processes have been developed and equipment with improved efficiencies have come into general use. For example, a few years ago there was a distinct trend in the larger newspaper offices of the country toward metal melting by electricity for stereotyping and other purposes. Through the American Gas Association's cooperative research with manufacturers, methods have been developed resulting in general acceptance of gas heat for these purposes by the newspaper industry.

For the fourth consecutive year the gas industry has sponsored a national cooperative advertising program, the objective of which is the promotion of gas as the modern, efficient fuel for household, industrial and commercial purposes. Sentiment for the program is stronger now than at the beginning.

During the 1939-40 campaign full-page, four-color advertisements are appearing in consumer magazines having a circulation of 17,658,000 copies per issue. This is augmented by other full-page advertising appearing in twenty-two trade and professional magazines, and by a large and growing volume of local gas company and dealer newspaper advertising built around the themes of the national campaign.

The Association's Executive Board has approved a continuation of this program to June, 1942.

President Beckjord informally addressing the Hutchinson Gas Club on December 11. On his left are Floyd W. Parsons, F. L. Fairchild, and L. O. Gordon

All-Gas Home Program

The A. G. A. All-Gas Home Program showed continued progress during the past year. The Builders' Competition, closed on July 21, 1939, with over twenty-one hundred prominent builders from all parts of the country officially registered in the competition. Over three hundred entries of All-Gas houses actually built in the two-year period ending July 31, 1939, were received and a large amount of favorable gas publicity appeared and is still appearing in the national press and the leading architectural, building, and consumer magazines.

Gas utility companies in all parts of the country are cooperating with the All-Gas Demonstration Home Program. More than 50 all-gas demonstration homes have been constructed throughout the nation and it is expected that additional homes will be built during the coming spring.

In addition to promoting the A. G. A. All-Gas Home Program, the Association actively engaged in promoting the Life Housing Program sponsored by *Life* Magazine with the first 6 homes open for demonstration throughout the country using "Gas for the 4 Big Jobs" with gas dominating the balance of the homes constructed. Recognizing that the increase in new home construction will continue during the coming year, the Association is continuing its activities to promote the construction of all-gas homes and to cooperate with all housing programs of merit.

Adequate publicity regarding the A. G. A. All-Gas Home Program will appear in the *American Builder and Building Age* Magazine and other publications during 1940.

CP Range Promotion

On August 1, 1938, the American Gas Association set up certified performance requirements to create gas ranges that excel in cooking performance. Since that time 25 range manufacturers have produced more than 400 models of gas ranges meeting these requirements and more than 100,000 Certified Performance Gas Ranges have been placed in American kitchens.

This new buying guide for modern cooking appliances has also had the effect of increasing the number and raising the quality of other gas ranges

(Continued on page 38)

What of the Future? . . . *The Possibilities and Importance of Adequate Research*

Elmer F. Schmidt

THE report of Frank C. Smith, chairman of the Special Committee on Fundamental Research, has been very interesting to all of us in the natural gas industry and has furnished the basis for much thought.* The report is so inclusive and so excellently presented that I hesitate to comment on it. But this subject of fundamental research is so tremendously important and so vast that I feel it will require the full cooperation of each of us, and that we must all convey our thoughts to the central committee for their consideration. I offer the following comments in an effort to start the ball rolling and to indicate that in my opinion the fullest success of this research program can only be achieved by the complete cooperation of each individual in the gas industry.

Sacrifices Needed

We know, often from bitter experience, that it is impossible to get something for nothing. In fact, quite often we get nothing for something, as drillers of dry holes can testify. It is evident that support of this research program will mean sacrifices on the part of the gas industry. Yet the research program promises nothing definite in return for these sacrifices. It merely offers a hope of material benefits in the rather distant future. And this future, as indicated by research men, lies from three to ten years from the date of initiation of active research work. Are we willing to make the necessary sacrifices? The answer of the industry as we have heard it is unqualifiedly *yes*.

* For complete report of Committee on Fundamental Research, please see A. G. A. MONTHLY for November, 1939, page 386.

- **The accompanying article by Elmer F. Schmidt, vice-president and operating manager of the Lone Star Gas Company, Dallas, Texas, and recently elected chairman of the Natural Gas Section, is the first of a series of articles by outstanding natural gas executives on subjects of vital interest to the industry which will appear in the A. G. A. MONTHLY during 1940.**
- **Herewith Mr. Schmidt presents convincing arguments for complete support of the industry-wide research program proposed by the Association's Committee on Fundamental Research. The possibilities inherent in such a program are tremendous, he states, pointing out that even now finished products made from natural gas are numerous, ranging from anti-freeze solutions to automobile bodies fabricated from plastics produced from natural gas.**

By ELMER F. SCHMIDT

Chairman, Natural Gas Section, American Gas Association

But if any of you have any doubts on this subject, ask your banker or your friends in the electrical, chemical, or petroleum industries, about the benefits of fundamental research to these industries. These three industries have had first-hand experience with the benefits of fundamental research and are thoroughly satisfied with the values it has returned to them. The railroad industry and the coal industry have been pretty much on the other side of the research fence until recently and it is our impression that some of the executives in these industries now lament the tardiness of initiation of research programs.

Maurice Holland, executive officer of the Industrial Research Institute, has asked the following questions:

"What is research in terms of industry?

"How do the conception and practice of research vary from industry to industry?

"How may the research experience of one industry be made useful to others?"

He then adds:

"The swift growth, present extent and future probabilities of the industrial utilization of research in America make answers to these questions obviously important. Witness the fact that American industry already invests annually in research about two hundred million dollars. Processes, products and profits are tangible and immediate results of this disbursement. Ultimate and abstract consequences are to be found in the answers to such questions as those above."

Cashing in on Research

In thinking over these questions and statements, we have been struck by two things: First, the tremendous size of the annual investment in research in this country as estimated by Mr. Holland; and, second, concrete but small examples of the accrual of benefits to our company from the research work of others.

Specifically, one striking case of cashing in on the research work of others occurred several years ago. We installed a gas stabilization plant that was itself the product of some applied research. Operation of this plant proved it to be entirely satisfactory from a stabilization angle, but showed very excessive corrosion of plant equipment. Our engineers studied ways of alleviating this corrosion for several years, and made some progress in so doing. Finally, one of our engineers found a very theoretical paper written by one of the best research men that ever lived, Dr. C. P. Steinmetz of the General Electric Company. This paper outlined theories that, if true, should solve the problem. Experimental work confirmed the theories, and operation of this plant has been entirely satisfac-

tory since making the changes in the plant indicated by the pure theory of this electrical wizard. It might be emphasized that this theory was entirely concerned with gas reactions and not with electricity.

On the other hand, Massachusetts Institute of Technology has recently announced the initiation of a program of research into the utilization of solar energy, backed by a gift of nearly $650,000. And the initial aim of this research is to develop economical methods for house heating, water heating, cooking and refrigeration, by the direct utilization of solar energy. More than half a million dollars are being spent in one of the world's leading technical institutions to determine whether "Old Sol" can be persuaded to put us out of business.

Threat to Complacency

These two instances serve to emphasize that we are definitely affected by research, even though we do not conduct fundamental research ourselves. Frank C. Smith stated:

"I see no reason why we cannot go on doing what we are doing now, that is, sell gas for the few simple purposes to serve in the comparatively few known fields of its use."

What will Massachusetts Institute of Technology have to say about that statement after it has spent its $650,000 in the intelligent way it will spend that amount? And if you still are not worried about loss of our present markets, go back thirty years and see how impossible it seemed then that the expensive electric light could ever capture our lighting load.

This picture so far is pessimistic, and presents some aspects of research unfavorable to the natural gas industry. But emphasis has been placed not only on the desirability but on the necessity of supporting the research program of the American Gas Association to the fullest extent possible. There is a bright side to the picture also and that lies primarily in the research work that has already been done, particularly by the chemical and petroleum industries, pointing the way to utilization of natural gas for purposes quite distinct from its use as fuel.

Mr. Smith refers to textiles "made of gas and a single additional chemical." A recent address by V. C. Morrell before the American Chemical Society, entitled "Development in Hydrocarbon Chemistry and Technology," is of interest in indicating the limitless varieties of commodities that may be produced from natural gas, and also is of interest for indicating that petroleum and natural gas may be considered as practically identical raw materials when handled with modern technology. Thus a tremendous amount of research work already done by the petroleum industry and the chemical industry is available to the gas industry just for the asking, or just for the reading. The finished products that may be made from natural gas are entirely too numerous to describe, but they range from anti-freeze solutions for automobile radiators, which incidentally has been produced commercially from natural gas for some years, to automobile bodies fabricated from plastics produced from natural gas.

The list of such chemical by-products of natural gas covers an amazing variety of articles. Among them, to mention just a few, are alcohol, silk stockings, plates for false teeth, rubber, cloth, explosives, shaving cream, medicines.

A totally different angle of attack is indicated by experiments being conducted at present on the distribution of natural gas as a liquid rather than as a gas. A tremendous field of pure and applied research is apparent on the distribution end alone, where large savings may be made to return profits to the industry.

The social aspects of research are profound and not completely comprehended at present, as indicated by Mr. Holland's quotation above. Dr. Karl T. Compton, president of Massachusetts Institute of Technology, has recently said:

"At this moment undoubtedly the greatest concern of the world is war and threat of war. A good deal has been said about the ways in which science has been applied to make warfare more destructive, just as science has also been applied to bring about a certain compensating degree of protection against new weapons. But there is one possibility in science which seems to me to be far more significant than these, namely, the use of science to remove some of the major causes of war.

". . . One of the earliest incentives to war was the invasion of one country by another for the purpose of loot. Later, as we became more civilized, actual looting as a motive yielded place to the control of population for purposes of taxation and the exploitation of labor and of natural resources. This is all part of the old primitive instinct of animals and men to secure the good things of life by taking them from someone else.

". . . More specifically, many nations have felt the urge to conquest in order to secure to themselves an assured supply of various materials which are necessary to the nation's economy. For example, Great Britain needs oil for her navy and food for her population, which cannot be produced in the British Isles. Germany and Japan need rubber, foodstuffs, and mineral resources. Even the United States—richest of all nations in its mineral resources—is inadequately supplied with such important materials as rubber, tin, and tungsten. Does national safety force these nations to conquest in order to assure themselves of these commodities?

"I believe that the record which I read in the crystal sphere justifies the assertion that the necessities of national economies could be taken care of by scientific research at a cost far less than that of a major war and within a time far less than that in which the effects of a major war could be overcome. At the same time this could be done not only without hurting anyone but with great indirect benefit to all concerned. Let me give a few examples:

". . . When substitutes for rubber are produced which are satisfactory for automobile tires and which can be produced at a reasonably competitive price, then one of the great causes of anxiety and international haggling will have been removed. . . . The development of suitable lacquers as substitutes for tin in the coating of containers for canned foods will make the

(Continued on page 38)

Schmidt Does It!

Being elected chairman of the Natural Gas Section does something to a man. Shortly after his election, November 23 to be exact, Elmer F. Schmidt, vice-president and operating manager of the Lone Star Gas Company, attained the goal of every golfer —a hole in one.

He produced the prize shot at the Dallas Country Club on the 132-yard fourteenth hole. While a newspaper reported that he threw his club into the air and grinned at the other members of the foursome—L. L. Dyer, Chester L. May and D. A. Hulcy—Mr. Schmidt states that he was very calm about it all. He's that kind of a man.

WHAT is believed to be the only lamp post memorial in the world was dedicated in Atlanta, Georgia, on Thursday, December 14, as the first official ceremony in Atlanta's "Gone with the Wind" celebration.

Installed late in 1855 and lit for the first time on Christmas Day of that year, the light was struck and damaged by a shell from General Sherman's artillery; retained in its original position for a period of more than eighty years; made a memorial to a prominent Confederate war veteran, and has now been restored by the Atlanta Gas Light Company as a perpetual light to the Confederacy.

It might, with equal truth, be said to symbolize 84 years of service given by the Atlanta Gas Light Company to the people of Atlanta . . . a service broken only when Sherman destroyed the gas works and re-

Lighting of historic gas street lamp in Atlanta

Atlanta Gas Lamp Memorial Shares Spotlight with "Gone with the Wind" Premiere

By J. H. REED

Atlanta, Ga.

sumed within a year after his armies had burned and left the city.

But back of this historic lamp post lies an interesting story for all gas men.

As early as March, 1853 . . . fifteen years before the establishment of the State Capitol in Atlanta . . . the question of lighting the city's streets came up in the city council.

At that time, oil lamps were installed at such locations as citizens were willing to keep them filled, trimmed and properly lit at night. One year later, Messrs. Perdieu and Hoyt offered to put in a coal gas plant, but the offer was not accepted. But in 1855, William Helme, of Philadelphia, made the council a proposition.

It was to erect a coal gas plant, lay mains in the streets and alleys of the city, and have the exclusive privilege of lighting the streets for a period of fifty years. The gas works were, furthermore, to be of sufficient capacity to manufacture 20,000 cubic feet of gas daily. The council was to secure and erect at least fifty street lamps and pay for lighting them at the rate of thirty dollars per annum. The cost of the gas company was estimated to be $50,000, and the city was to take $20,000 of the gas company's stock, paying for it in bonds bearing 7% interest. The property of the gas company was to be free from taxation.

A cautious committee from the city council "sounded out" the Atlanta public and reported it was almost unanimously in favor of the proposition.

So the contract was signed.

Thereupon the city contracted with the Schofield Iron Works, at Macon, Ga., to cast and deliver to it, on or before October 1, 1855, fifty "ornamental lamp posts including lamps and burners." The cost was $21 per post.

The lamp posts were duly received and installed. A gas plant was constructed on Marietta Street and the mains laid. And on Christmas Day, 1855, the lights were turned on for the first time, with a celebration almost equaling that of "Gone with the Wind."

For nine years the original fifty lamp posts gave good service and were augmented by other lamp posts . . . though without the eagle atop . . . making Atlanta, for its day, an exceptionally well lit city. Then General Sherman laid siege to the city. After several weeks of desultary shelling with lighter artillery, Sherman then brought up the "Big Berthas" of his day . . . a battery of thirty-pound Parrott cannons . . . and Atlanta began to learn what war . . . and hell . . . might be like.

Superintendent Warner, of the gas company, and his six-year-old daughter were killed when a shell struck a house in which they had taken refuge. Scarcely a building in the Alabama and Whitehall street business district escaped damage. And a shell, striking a lamp post at the corner of Whitehall and Alabama streets, damaged it, killing one man . . . a barber named Sol Luckie . . . and injuring several others.

This is the lamp post which the gas company has restored and which has been dedicated as a memorial.

Set up again after the bombardment and burning of the city, it remains serene in its original location, one of the few landmarks of the war to remain in place.

It has remained on its corner through the advent of electric street lights, the building of the Whitehall Street viaduct and later of the Alabama, Bryor and Wall Street viaduct system, and the construction of the Atlanta National Bank Building.

Some years ago, the Old Guard of At-

lanta, in cooperation with the Atlanta Chapter of the U.D.C., placed a bronze shield on the battered old lamp post as a memorial to the late Col. A. J. West, a beloved veteran and citizen. The shield remains as part of the lamp post. Now the restored light will burn continuously as a memorial to the Confederacy as well; an unusual contribution to the community from its gas company.

To restore the old light, much research had to be done. But from old drawings and descriptions, the company was able to reproduce the globe and burner accurately, even to the eagle which tops it. Workers drilled through solid cement to lay the gas pipe to the post.

And it will serve, among other things, to remind the people of Atlanta of a gas service which it took an invading army to interrupt and which has been efficient and continuous for 75 years.

Appliance Sales Up

GAS appliance sales throughout the country registered a substantial increase during the first ten months of this year as compared to the same period in 1938 with sales in October, 1939, greatly exceeding those of October of last year, it has been reported by the Association of Gas Appliance and Equipment Manufacturers.

An increase of 44.9 per cent in gas house heating equipment sales has been noted during the first ten months of 1939 as compared to the same 1938 period. October, 1939, sales of gas house heating equipment were 59.5 per cent higher than October of last year.

While sales of gas water heaters increased 28.6 per cent for the ten-month period of 1939 as compared to last year's similar period, October, 1939, figures for this appliance category show a rise of 40.6 per cent as compared to October, 1938.

Domestic gas range sales increased 31.6 per cent for the ten-month period and registered a rise of 25.6 per cent during October, 1939, as compared to the same 1938 month.

James J. Norton Is Dead

JAMES J. NORTON, senior assistant in the tax department of the Consolidated Edison Co. of New York, died December 11 following an operation.

Mr. Norton joined the company as an office boy in 1895 and would have completed forty-five years of service on February 18. During most of his business career he was concerned with the accounting and auditing aspects of the utility business.

He had been a member of the American Gas Association since 1925 and a charter member of the Gas Accounting Society which later became the Society of Gas and Electrical Accountants.

Natural Gas Leader Passes Away

A. E. Merchant

ARTHUR E. MERCHANT, 57 years old, one of the first persons in the country to experiment with odorization of natural gas, died on Dec. 5 in New Orleans.

Mr. Merchant, a native of Tourquay, England, had been a resident of New Orleans since 1917. During that time he served as general superintendent of the New Orleans Gas Light Company, which later became a component of the New Orleans Public Service Inc. He retained the position with the latter organization.

Prior to coming to New Orleans, Mr. Merchant had served as general manager of the Altoona Gas, Power and Fuel Company at Altoona, Pa., and of the Union Gas Company in Bloomington, Ind.

He was president of the Southern Gas Association in 1927 and was a member of the American Gas Association at the time of his death. He served in the A. G. A. Technical Section Managing Committee from 1936 to 1939.

He was given a testimonial dinner by the Public Service Company on December 2, 1937, on completion of 20 years of service with the company. He completed 22 years of service last Saturday and had attended his duties through Monday.

Gas Heating Popular in Memphis

GAS heating in the homes of Memphis people is increasing in popularity. Sales of gas heating appliances by dealers of Memphis show marked increase month-by-month this year as compared with last year, according to officials of the Memphis Light, Gas and Water Division. These increases are indicated by the tabulation below:

Current Month	*This Year*	*Last Year*
Boilers	65	30
Floor Furnaces	743	443
Circulating Heaters	272	172
Space Heaters	1419	1008

Year-to-date (10 months)	*This Year*	*Last Year*
Boilers	314	212
Floor Furnaces	3188	1880
Circulating Heaters	477	354
Space Heaters	2705	2223

Natural gas is the fuel offered to Memphis consumers. It was introduced into the distribution system of the city January 1, 1929, being piped from the Monroe Louisiana fields through the lines of the Memphis Natural Gas Company.

The service was supplied for a number of years by Memphis Power and Light Company, but during the past summer the physical properties of that company were acquired by the Memphis, Light, Gas and Water Division which now operates the combined light, gas and water services in the city.

Electricity is supplied by the Division at the T.V.A. rates plus a small surcharge. Natural gas, likewise, is offered at a very low rate, and announcements by officials of the company state that a reduction in domestic rates will be put into effect at an early date.

New Tenants Agape at Gas Ranges

LIFELONG NEW YORKERS who had never seen a gas range in operation or an automatic refrigerator, are among the families of low income who have moved into the Red Hook Houses, Brooklyn, the last unit of which was occupied on December 15, Gladys A. LaFetra, manager of the New York City Housing Authority said recently.

"We had to show one elderly couple, who had lived in old-law tenements here all their lives how to light the pilot light of their gas range," she said. "When we got through, the old man said, 'What'll they think of next?'"

A tenant reported that some of the children from cold water flats were amazed to find hot water running all the time from the taps. "They'd put their fingers under the water, and say, 'Gee! It's hot!'" he recalled.

Problem for Engineers

UNDER the above heading, "The Sun" (Sydney), called attention to the fact that an engaging young lady of 23 years had obtained a Higher Grade Gas Engineering (Supply) Certificate, and suggested that her qualifications had set gas engineers a problem.

Fortunately the news came from England, so that we have no need to worry about competition from lady engineers in Australia. What is disquieting about the paragraph, however, is the young lady's own statement that "really there is nothing to prevent women doing engineering work, and as a matter of fact they would find that using a spanner is much more fascinating and much less tiring than making beds or washing up."

To us it all seems to be a matter of what you intend doing with the spanner.—*The C.G.A. Service Messenger* (Australia.)

Tools of Progress . . . *Domestic Gas Appliances Further Improved for 1940*

By W. R. TELLER

A. G. A. Testing Laboratories

OUR industry enters the year 1940 with every justification for confidence in the future of its residential services. Statistics recently released indicate an increase in gas range sales of 32% for the first 9 months of 1939, compared to the corresponding period of 1938. Likewise an increase of 42% in gas heating equipment sales was recorded for the first 9 months of this year. A similar situation exists in water heating and refrigeration where sales increases of 42% and 30%, respectively were made during this period.

National Picture Favorable

While less progress may have been made in certain localities than these data show, the national picture seems to be extraordinarily favorable to gas, since these sales increases have been in the main greater than those made by competitive equipment.

It is significant that this progress has been so marked in those fields where gas has faced and successfully met, by consistent and aggressive coordinated action, the vigorous competition of electricity, oil and automatically fired coal. A considerable part of this success is no doubt the cumulative result of persistent advertising and promotional effort built around the A. G. A. National Advertising Campaign and the Certified Performance range program.

Numerous other factors would, of course, have to be considered in a thorough analysis of the causes and effects, but these activities have been so outstanding and comprehensive that certainly their relationship with progress cannot be accepted as a coincidence. Nevertheless, it must be acknowledged that in such a highly competitive field as home appliances, maintenance of a large share of four major domestic markets, to say nothing of our improvement in them, must have been fundamentally based on the availability of good appliances for sale. In this connection the concrete assistance of the CP program to the improvement of gas ranges should be noted as one of the components of a coordinated program.

Refinements in Equipment

It is believed that gas has had, with possibly a few exceptions, domestic utilization equipment which would, at any time in past years, compare favorably with competitive equipment available at the same time. Most gas appliances are stabilized mechanical types worked out over a period of years by patient effort on the practical basis of experience. Accordingly, changes are generally in the nature of refinements in materials, design, and production methods. Improvements sometimes considered revolutionary or basic

Photographed here are actual installations of gas water heating and house heating equipment in homes which were entered in the A. G. A. Builders' Contest last year

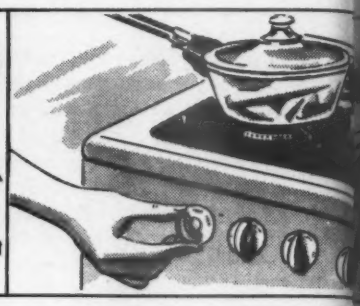
Gas-fired units are available for standard basements, utility rooms, closets and attics

Equipment shown in these illustrations does not include 1940 improvements, but is recent enough to give a good idea of the convenient, compact units now serving these markets with a high degree of efficiency

The modern gas range sells itself

heating units required for a given heat output. A similar situation is developing in hot water units where higher heat transfer rates and smaller water volumes are being combined to produce more compact units for a given capacity, or, looked at the other way, logical developments and will probably gain wider acceptance. The first makes for easier installation and in the case of most types of boilers and gravity furnaces, for complete independence of electrical connections. The second eliminates the necessity for Fall turn-

Smart Styling—Modern gas ranges are jewels created in full-porcelain enamel, with sizes and styles for all kitchen schemes



Click Simmer Burner—Dependable low economy flame with "click" signal for "waterless cooking"

are generally the cumulative effect of such refinements.

It is necessary to acquire the conception that most industrial progress, including that in the gas appliance field, is an evolutionary and not a revolutionary process; otherwise a comparison of 1940 gas appliances with preceding models may prove disappointing. It is reasonably certain that no fundamental structural change in gas appliances will be offered the public in 1940. However, it is certain that 1940 models will undergo further improvement and this will perform their intended functions in a better, more convenient and more efficient way.

Heating Appliances Improved

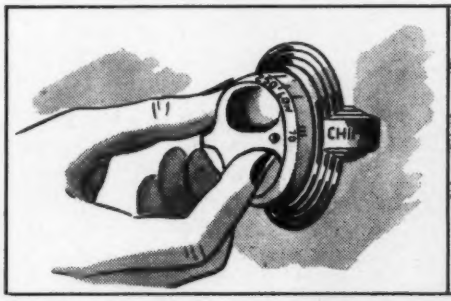
Central heating gas appliances are an excellent illustration of equipment that has been refined to a point where any radical change would be indeed revolutionary. Recent developments have been centered largely on designing special types of warm air furnaces for application to specific requirements. One type has been engineered for installation in closets of apartments or of small modern dwellings where space is at a premium. Another type is suited for use in overhead installations such as attics of residences. A third is designed to be suspended from joists in the basement, again for the purpose of conserving space.

A rather noticeable development has been the reduction in size of warm air more capacity for the same size. When anyone exclaims about the miracles of a modern high compression motor, let him be reminded that modern gas heating units also embody a remarkably large amount of capacity in small packages.

Controls on gas central heating appliances also have been further refined and perfected. This field is so extensive that only two examples will be cited, principally to demonstrate the versatility of gas men. One development uses the gas pilot to generate sufficient electric power by a thermocouple to energize the entire control circuit so as to eliminate dependence on utility electric service

Another development uses the utility electric service as an ignition means to eliminate dependence on a constant burning gas pilot. Both devices are ons and can give the customer the benefit of gas heating in seasons when conventional gas pilots would ordinarily be turned off.

A popular form of house heating, particularly in warmer climates, is by means of space heaters and floor furnaces. The outstanding trend in gas space heaters is toward vented types of circulating heaters. Many models of such heaters are being equipped with automatic temperature controls and in some cases fans, so that full advantage of gas as comfort heating may be obtained with this class of equipment.



Heat Control—Assures exact oven temperature required. No more "guess-work" baking

Precision Oven—Pre-heats faster. Reaches new high temperature of 500°—new low of 250°. Holds any temperature steadily without fluctuation

In spite of this trend, a substantial and logical market is satisfied by the other popular types of space heaters such as unvented circulators, radiant heaters and gas-steam or hot water radiators. In space heating as in other gas appliance fields, it is significant

that various types have been designed and perfected to meet different climatic and installation conditions. Thus the problem of assuring customer satisfaction lies almost entirely in selection of the proper type and size of heater for a particular job.

amined and conclusions reached which apply generally rather than to isolated models. Possibly the keynote of new models is super capacity. Giant burners are more frequently seen, as are separate broiler compartments. Even the more modest ranges have four all-purpose top cooking units, which is a point to consider when comparing competitive types. This more modest gas range also has broiler and oven compartments, which is also a point often neglected in comparisons with competitive equipment. As indicated, separate broilers, completely independent of the baking oven, are rapidly becoming more widely available on medium and higher priced ranges. The advantage of such a feature in affording superior and faster super-service needs no comment.

Separate Smokeless Broiler—New grill keeps fat away from flame. Eliminates smoke

Automatic Lighting—No matches to strike—no waiting—instant heat—burners non-clog

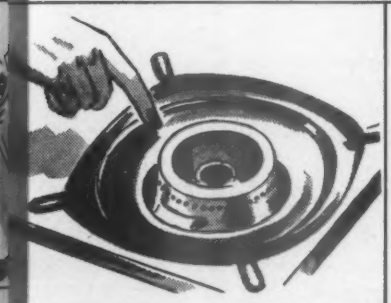
Considerable development of floor furnace design has resulted in the creation of what may be considered new types. Wall and dual register type floor furnaces provide service equivalent to the original type with less floor space requirement since warm air outlets are located in the wall. Extended duct floor furnaces provide for heating of rooms on two floors. Some models of floor furnaces are equipped with fans as well as with automatic room temperature controls. Developments here are again in the direction of modifying design to produce special types suitable for specific application and of refining all types to produce more convenient and satisfactory heating service.

Modern gas ranges for 1940, so far as outward appearances are concerned, may seem to be very similar to those of 1939 if they are not carefully ex-

Pastry ovens, which are nothing more than the conventional oven greatly reduced in size, have found wide acceptance on merit. These ovens are, however, adequately sized to perform most baking operations for an average family. For such operations their use represents a definite saving in fuel and a real contribution to cooler kitchens. Consequently, ranges equipped with pastry ovens are well qualified to meet electric roaster as well as electric range competition.

Pursuing the subject of super-service further, the prevalence of 6 and 8 burner gas range top sections must also be noted. Such tops are a real boon to American women, and many whose culinary techniques are somewhat cramped by the limitations of 3 or 4 top units could be completely sold on gas on this point alone. In this connection it should be noted the more capacity that is built into gas ranges and the wider the variety of specific functions (such as separate broilers, pastry ovens, griddles, warming closets, etc.) the more difficult it becomes for electric competition to offer similar advantages. They present a real installation and distribution problem with the 8 or 9 kilowatt hour connected load represented by contemporary electric ranges.

A necessary corollary of capacity is convenience. Items mentioned in the foregoing are just as important and valuable from the standpoints of saving the user's time and disposition as they are in accommodating more and larger cooking operations. Other features contributing to greater conven-



Giant Burner—For fastest top stove cooking ever known. Extra wide heat spread for large utensils

Scientific Insulation—Holds oven and broiler heat in. Keeps kitchen cooler —saves gas

The 1940 gas refrigerator is beautiful, roomy and economical

ience of operation are hi-lo and simmer section top burners with which simmer flames can be instantly selected. With this additional feature, all gas top burners retain the fundamental and exclusive advantage of permitting ready adjustment of flames to produce exactly the heat required. Convenience in cleaning gas ranges has not been neglected. Top burners of bright stainless metal or with porcelain enameled finishes are not only easy to keep clean but provide an incentive and reward for cleanliness.

All parts except the range chassis and body may be readily removed for cleaning. This is important since any range regardless of the type of energy or fuel, becomes soiled from normal working processes. Automatic ignition of top and oven burners is distinctly a convenience feature. However, a recent development in this line, electric ignition for oven and broiler burners, has been designed not to improve convenience but to better economy of operation.

Flush Wall Construction

One of the most significant improvements in gas range construction has been the flush to rear wall construction. In many cases this construction has been engineered into the range as an integral part and in some instances the top surface and back splasher are one continuous piece, thereby eliminating one more joint where food particles and dust may collect. The primary objective of flush to rear wall construction was to provide for more attractive installation. It is probable, however, that this range type will tend to popularize oven flue connection since a concealed connection can be made without detracting from the appearance of the installation. The advantages to be gained by oven flue connection are cooler kitchens and elimination of oven cooking odors resulting from discharge of hot food vapors to the outside air.

Manufacturers have consistently taken advantage of new materials which are proved to be adaptable to gas range construction. Die-cast aluminum has long been employed for top burner heads; stainless steels have been adapted to use for broiler grids; and ceramics have been developed for the same purpose. Currently, it will be found that new glazed heat- and shock-resistant types of ceramics are being adapted to top burner grate construction. Glass in its various forms has been a much publicized material, and as would be expected the newer forms have been capitalized on by the range designer. For example, fiber glass wool is employed as an insulating medium on many ovens and broilers. A more obvious use of hard heat-resisting glass has been in oven doors, a feature, incidentally, which seems to have been copied on electric ranges, while, as everyone knows, the porcelain enamel finish on modern gas ranges is also a form of glass.

Gas Advantages Inherent

In spite of periodic refinements and improvements in gas ranges, the real advantages of gas for cooking are fundamental and, as such, little if any radical changes could be expected. In contrast with cruder fuels, gas has superiority in cleanliness, convenience of operation, and convenience of ready availability. Unique among all forms of energy, gas permits easy and exact adjustment of any desired degree of heat to the requirements of any operation. This point was discussed previously in connection with top burners. However, it is just as important in oven sections. Electric ranges are necessarily equipped with snap-acting thermostats so that during a baking operation heat is alternately completely "on" and entirely "off" producing a fluctuation in oven temperature. This is single cylinder performance. Gas ranges have graduating thermostats which provide continuously and uniformly the heat required to maintain exactly any predetermined oven temperature. This is V-8 performance.

New developments in gas refrigerators feature changes in interior arrangements as well as incorporating other improvements. The 1940 models provide for greater flexibility in arranging foods and more available food storage space, superseding the older style where shelving and conveniences were fixed. An adjustable sliding shelf that can be raised and lowered without removing the food is an exclusive innovation.

In appearance the 1940 refrigerators continue to be in the front rank. Wider doors which create the impression of a larger front surface and allow for even plainer and cleaner cut lines than those of the models of the last two years are featured. The paneled doors, first introduced in last year's models are used again, the new paneling effect being heightened by having the panels extend to the top of the door.

All former improvements in the construction and design of these refrigerators, such as the one-piece steel frame and the concealed hinges, are still features of the new models. These units, with a freezing system that assures permanent silence, comparative freedom from repair, long life and economy of operation, are a decided asset to the gas industry.

In the field of gas water heating will be found a similar refinement of fundamentally sound characteristics. Also noticeable is the engineering of new types to satisfy special water heating requirements. An example of this type of development is the so-called sink- or faucet-type heater which has been popular in Europe for years and which is essentially a compact instantaneous heater suitable for installation at the point of usage over a sink. The market for such heaters, aside from general application, is in homes without hot water piping.

"Atmospheric" Heater

Another type new to America and now in the experimental stage is the "atmospheric" heater known in Australia as "coppers." On this type, water in the storage vessel is open to atmospheric pressure. As a consequence, light gage boilers can be successfully employed and such controls as temperature, pressure, and vacuum relief devices may be safely dispensed with. Based on foreign experience it is reasonable to expect that this type of appliance should find good acceptance for certain applications.

Manufacturers of water heaters have also been quick to avail themselves of new materials. Storage vessels of automatic storage type heaters are now constructed of the following materials: galvanized iron, silicon bronze, monel, copper, and copper-clad steel, the last mentioned being a recent development. Experimentation has been carried out along other lines such as porcelain enamel coatings on interior tank surfaces. However, materials now commercially available seem adequate to meet all requirements of serviceability

demanded by widely different conditions of water supply and usage.

In comparison with competitive fuels, the basic advantage of gas for water heating is its flexibility. Only with gas are there available types to accommodate all water heating needs. Hence it seems unnecessary for the customer to adjust hot water requirements or usage to a limited range of capacities such as is the case with competitive equipment. A further extension in sizes and capacities of conventional types of gas water heaters has been made in addition to development of the new types indicated, so that the gas industry is well equipped in this field for the immediate future at least.

In general, it seems apparent that progress in design of the major types of gas appliances has been substantial and comprehensive. As a consequence, the industry enters 1940 with a complete line of perfected appliances with which a further broadening of markets and increase of sales is sure to be realized even in the event of more vigorous competition.

Henry L. Doherty, Brilliant Utility Leader, Dies

Henry L. Doherty

THE day after Christmas, the gas industry lost one of its greatest and most beloved figures—a man who through sheer ability and industry rose from a $2-a-week office boy to head a vast utilities network and wielded strong influence on national affairs. Henry L. Doherty, president of the Cities Service Company and for decades a powerful constructive force in the public utility field, died of bronchial pneumonia December 26 at Temple University Hospital. He was sixty-nine years old.

At the time of his death, Mr. Doherty was a director of the American Gas Association, having maintained even during years of illness an active interest in Association affairs which dated back to the American Gas Institute, predecessor of the A. G. A. Mr. Doherty made many valuable contributions to the Association's work, serving on many of its foremost committees, addressing its meetings, and participating wholeheartedly in its cooperative efforts for the advancement of the industry.

He won many honors both within and without the gas industry. He was the first winner of the Beal Medal, given annually for the best technical paper contributed to Association meetings. In recent years when ill health prevented his attendance at annual conventions of the Association, he never failed to send a telegram of greeting and good wishes.

Mr. Doherty was born in Columbus, Ohio, on May 15, 1870. His father, Frank Doherty, was an inventor and engineer, thus setting the pace for his son. However, when Henry Doherty was only ten years old he found it necessary to earn his pocket money by selling newspapers. Two years later he quit school without telling his mother and got a job as office boy with the Columbus Gas Company. Although his library was one of his joys in later years, Mr. Doherty always prided himself on having received almost no formal education.

By 1896, Mr. Doherty had been promoted by the firm in his home town to chief engineer and assistant to the manager and in that year he went to Madison, Wis., where he became manager of the Madison Gas and Electric Company. He stayed there long enough to be made president of the firm and then returned home to become engineer for the Columbus Electric Company.

Then, in rapid succession, he was general manager of the St. Paul (Minn.) Gas Light Co. and of the St. Paul Edison Co., constructing engineer of the Jacques Cartier Electric Co., in Quebec; chief engineer of Emerson McMillian & Co., in New York; manager of the American Light & Traction Co. and president of the Denver Gas & Electric Co.

Mr. Doherty was only thirty-five years old when he left the Rocky Mountains and came to New York to fight with the best of them for a place in the rising industrial sun. No one in the financial district was particularly impressed when, in 1905, the young man from Columbus, via Denver, rented the smallest office he could find in 60 Wall Street and started the firm of Henry L. Doherty & Co. Nineteen years later he bought the twenty-six-story building at 60 Wall Street for more than $2,500,000.

The point, which many missed at the time, was that Mr. Doherty, despite his youth, had a firm grasp not only on the financing of a public utility but on the details of organization, manufacture and invention. He was the first to advocate the abolition of purifying houses in gas works and to place the purifiers outdoors—a practice which later was followed generally throughout the industry.

Even before he left the Columbus Gas Co., Mr. Doherty had done pioneer work in introducing the Welsbach lamp. Although he didn't bother to patent many of his discoveries, his inventive bent had improved gas meters, gas benches, scrubbing and condensing apparatus, methods of charging for gas and electricity, and the displacement gas calorimeter. In his spare moments he had invented appliances for handling, washing, drying and cleaning glassware and brass, a carrying device for glass chimneys, and gadgets facilitating distant control of lamps used on signs, show windows and theaters.

Mr. Doherty, too, is generally credited with being the first operator of gas and electric corporations to introduce modern commercial methods of advancing the industry. He started a systematic advertising campaign in the newspapers designed to present his concerns to the public as personal, human outfits.

For more than ten years Mr. Doherty was a vigorous and almost lone champion of governmental regulation of the production of oil. The waste of petroleum complacently tolerated by other producers gave him cause for great alarm and he preached conservation from one end of the country to the other.

The Franklin Institute gave Mr. Doherty its Walton Clark gold medal in 1930 for his "outstanding work in development of the manufactured gas industry." Lehigh University conferred an honorary engineering degree upon him the following year and an honorary degree of Doctor of Laws in 1937.

Intelligence Test for Utilities

BORROWING a leaf from the magazine *Time*, the Citizens Gas and Coke Utility, Indianapolis, has developed a novel and effective means of educating company employees on the utility's problems and policies.

The December issue of the company's magazine, *The Gas Flame*, carries a double-page spread consisting of a Utility Intelligence Test, which covers in 20 questions many of the company's affairs. Each question is followed by five answers, one of which is correct, the other four being wrong. The test is complete with a score sheet and the answers are listed on a later page in the magazine. Each correct answer counts five points and a perfect score brings 100 points.

In view of the popularity of intelligence tests of this type, it is considered by company officials to be an ideal method of conveying information to their employees who consider it a game and learn while they play. It could well be adopted by other companies to their advantage. G. A. Saas, advertising manager of the Indianapolis utility, is responsible for the idea.

Before launching an industry-wide sales program, the joint Committee on Summer Air Conditioning met in New York on December 4. Left to right, seated: Charles R. Bellamy, chairman, Franklin T. Rainey, Roy P. Wilson, G. F. Zellhoefer, Harold S. Birkett, James C. Patterson, D. B. Williams, C. D. Henry, Roy E. Wright. Standing: Roy Scott, Anne Rivoire, Kendall B. Castle, Jr., C. F. Cushing, John deB. Shepard, Eugene D. Milener, and Leon Ourusoff

Air Conditioning . . . *Gas Industry Adopts National Sales Program*

A FORWARD step of far-reaching significance in the gas air conditioning field was taken on December 4 at a meeting in New York of the Joint Committee on Summer Air Conditioning under the chairmanship of Charles R. Bellamy, of the Columbia Gas & Electric Corporation. This group, which is the working committee of the Committee of Executives on Air Conditioning headed by Walter C. Beckjord, outlined and endorsed a national gas air conditioning sales plan for the coming year which is designed to capture this important load for the gas industry. It is a comprehensive but specific program, based on careful study and the realities of the industry's situation in this field.

This comprehensive program was first presented in the 1939 report of the Industrial and Commercial Air Conditioning Committee of the Industrial Gas Section.* It showed that the task of penetrating local air conditioning markets and thus developing national acceptance is so great as to call for organized cooperation of the entire gas industry with established local and national distribution agencies. That is the objective of the new sales program.

Before outlining the program, it is desirable to review the present sales status of summer air conditioning with gas, as described in the 1939 committee report.† This report called attention to the fact that equipment developments during the past eighteen months have given the gas industry better tools with which to penetrate the air conditioning field than have heretofore been available.

Marketing Methods Fall Short

Despite these favorable developments in equipment, existing marketing methods have failed to produce a significant sale of gas using summer air conditioning equipment. [There are something over 500 installations, mostly in industrial and business establishments.] For this reason, it was deemed essential to analyze these methods with a view to determining what additional steps could be taken to obtain broader acceptance of available equipment.

The major weakness in the setup, as reported by the committee, was the lack of any organized and unified effort on the part of the industry to obtain summer air conditioning business. Scattered efforts in varying directions have been made by manufacturers and gas utilities. In spite of this, only relatively few installations have been made in industrial plants with specific requirements best met by gas equipment, or in commercial or residential application where personal interest or gas company prestige was sufficient to overcome the normal obstacles to the sale of gas equipment.

It is easy to understand under these circumstances why the sale of gas equipment has not yet reached the stage where it can be compared with that of other equipment which is aggressively pushed and well installed and serviced by competent engineering contracting organizations operating in every city and moderate sized town in the country.

Air conditioning has become well enough accepted so that the ever-increasing group of prospects for improved comfort or product control appeal for information to the established air conditioning outlets in their territory—all of whom are prominently listed in the classified telephone directory under "Air Conditioning." No

* The Industrial and Commercial Air Conditioning Committee of the Industrial Gas Section for five years has presented yearly reports on this subject, as equipment and sales have been developed. Beginning in December, 1939, this committee will be known as the Joint Committee on Air Conditioning of the Industrial Gas and Commercial Sections.

† Copies of the complete report of the Industrial and Commercial Air Conditioning Committee are available at Association headquarters.

longer is it necessary for the local prospect seeking to inquire into the mysteries of air conditioning to look to his utility for advice in this relatively new science. Air conditioning is in every town, and furthermore, accepted to the point where the purchaser is interested in buying results at reasonable cost without caring to, or being able to, inquire into the method used to obtain them.

The help of these local engineering-contractors who assemble and install the parts that make the complete air conditioning system must be enlisted by the gas industry if gas summer air conditioning equipment is to be widely marketed. Currently available gas air conditioning equipment as is the case with electric air conditioning equipment must be welded into a system before it can do an air conditioning job and the complete installation involves much work by many trades after the gas-using device or other air conditioning equipment is laid in place. Plumbing, water and steam piping, electrical work, sheet metal work, and in many cases cutting, patching, plastering and painting must be done to complete the job. This is not work properly or profitably (if competitive) done by a utility, but is at present being done competently by concerns to whom the public looks for air conditioning advice and installation.

These engineering-contracting concerns are the backbone of the whole air conditioning industry and this industry must look to them to develop further the commercial and industrial air conditioning business and to open up the vast potential field of domestic summer air conditioning for gas.

Business Reaches Millions

The 60 to 80 million dollars worth of annual business currently being done by the entire air conditioning contracting industry is possible not only because the several nationally recognized manufacturers have large and efficient sales and engineering organizations handling large contract work on a direct basis, but primarily because these and other manufacturers obtain distribution through at least 1500 retail engineering-contracting concerns throughout the country. If the gas industry is to obtain its share of the air conditioning business, it must develop a distribution organization capable of competing with this aforementioned one, or else must see that gas products are placed in the hands of the existing organization for sale by it.

Due to engineering and contracting operations involved in the sale of air conditioning equipment, it is felt that every effort should be made to utilize the existing marketing facilities for the sale of gas equipment.

The problem of the gas industry, therefore, is to develop acceptance of gas equipment by the existing air conditioning distribution outlets and to further assist them in obtaining public acceptance for this equipment. However, the first phase of this problem is the most important, for it has been pointed out that in most cases the

Gas summer air conditioning is adaptable to practically every type of business or home. Illustrated below are six different but highly successful applications: a bank; home; department store; museum, where manuscripts and objects of art are stored; theatre; and a commercial concern manufacturing pharmaceutical tablets

average customer accepts air conditioning performance without regard to the form of energy used in obtaining it.

In order to obtain acceptance of gas using equipment by the air conditioning trade the committee recommended that an organized campaign of engineering education must eventually be addressed to the air conditioning industry by the gas industry. This campaign, it was pointed out, must thoroughly acquaint the entire industry with the technical features of available gas equipment and how it fits the picture in each specific type of locality—as to its adaptability to geographic and climate conditions, local water conditions, rate structures, as well as its special adaptability to specific air conditioning problems.

Central Agency Urged

The preparation and distribution of information of this nature would require the service of a central agency to compile general engineering data relative to gas equipment. This organization must sell every cooperating gas company on the necessity of assigning a trained air conditioning man to work locally with the central agency in qualifying the possibilities for various gas devices in each territory.

Such qualifications would involve a survey of the market to determine applications specially adapted to any given kind of gas equipment and to determine the competitive position of all gas using equipment, both from the first cost and operating cost standpoints. After proper qualification had been made for each territory, data pertaining to favorably reported gas equipment should be presented to each engineering-contracting agency and to architects and engineers in that territory, together with a listing of especially favorable types of applications and favorable economic factors.

The central organization would continue to maintain close touch with development of new or existing equipment and would act as a clearing house for interesting information from both manufacturers and field forces, distributing pertinent information to all interested parties. The central agency would also be in a position to obtain general publicity and to cooperate in advertising activities when these appeared desirable.

The local gas company representative would maintain advisory and assisting contact with local contractors, engineers and architects, and wherever possible, develop local prospects for gas air conditioning which would in turn be turned over to the local distribution agency.

Such a setup as that described above in the 1939 committee report would, according to that group, provide a channel for the smooth flow of correct information from manufacturer to field and should facilitate the distribution of gas air conditioning equipment by educating the trade throughout the country to its qualifications, showing where such equipment is obtainable and assisting in its sale.

In an analysis of the problem, the committee offered the following outline of the sales problem facing the industry:

1. In considering the application of available gas using air conditioning equipment, it is essential that the type recommended be suited to the geographical and climatic location, the kind of application, and all other conditions to be met, with full appreciation of the interests of the owner. There exists no single system—gas, steam, oil or electric, which is "The Best System" for all cases.
2. The several nationally recognized manufacturers of electric refrigeration equipment (all inherently of the same type), have such broad distribution and effective coverage, that practically every air conditioning problem now comes to the attention of the hundreds of agencies handling that type equipment.
3. These hundreds of agencies for electric equipment of practically identical type, maintain effective sales engineering, contracting and service staffs. Such agencies are primarily in the air conditioning business.
4. The distribution organization or agencies back of gas using air conditioning equipment are so limited in facilities as to make it impractical to obtain more than high spot coverage.
5. For these reasons, coupled with greater public acceptance, repetitive advertising by nationally known names and powerful electric utilities,—it is easy to understand why the great majority of prospects are continuing to purchase electric refrigeration equipment for air conditioning purposes, despite the efforts of unorganized opposition.
6. Gas companies can develop prospects for gas using air conditioning equipment and assist in the engineering analysis of cases for which such equipment is suited. Such assistance is valuable but is not sufficient.
7. Gas companies must enlist the cooperation of those agencies which really cover the air conditioning field and which are in a position to offer the facilities which, generally speaking, have not been made available to them by the present manufacturers of gas-using equipment.
8. With the present rapid development of gas using absorption refrigeration equipment by at least three responsible companies as an adjunct or alternate to gas using dehumidification equipment, the gas industry is potentially in position to offer a variety of equipment for the solution to air conditioning problems calling for reduced temperatures, as well as to those problems requiring only humidity reduction or control.

On the basis of the above, the following seven-point program of action was evolved by the committee and adopted for 1940 by the Joint Committee on Summer Air Conditioning at the December 4 meeting:

1. The A. G. A. should employ a highly qualified air conditioning sales engineer (hereinafter called "agency") having broad industry contacts coupled with executive ability,—for the sole purpose of coordinating all relevant and pertinent activities of all gas companies and every responsible manufacturer of gas-using (direct or indirect) air conditioning equipment.
2. Through this agency, distribute unbiased and *current* factual data on:—available equipment and methods; present and potential markets; factors which influence choice of equipment and methods; proven promotional and/or selling plans. One report per year from the air conditioning committee is a mere gesture in this direction.
3. Through this "within the industry" propaganda and general educational activity, *sell* (by personal contact) the most favorably situated gas companies on the absolute importance of assigning one or more qualified men to the *full-time* job of emulating locally what the agency is doing nationally.
4. With this newly acquired individual gas company effort, properly guided within the industry,—comprehensive local surveys, (as the first step) can be made upon which to base the need, extent and direction of local promotion. With but few exceptions, gas utilities have no conception of what is involved in actually getting into the summer air conditioning picture.
5. Where justified by territorial surveys as to potential markets for gas air conditioning, every gas utility concerned should air condition their sales offices. The gas industry simply must take its own medicine before it can successfully prescribe for its customers.
6. The choice of equipment and/or method for these "demonstration" installations should obviously be typical of the needs for the territory involved,—after giving full effect to comparative costs of

utility service, availability and temperature of water supply, and local climatic conditions. A practical knowledge of these influencing factors places the utility air conditioning engineer in an excellent position to act as an unbiased consultant.

7. The choice as to *type* of organization employed to engineer and install gas company air conditioning jobs should be predicated upon local as well as national reputation, together with the facilities that can be offered to "carry on" a *continuing* selling, engineering, contracting and servicing program in cooperation with the local utility. This is vital.

In launching this program, the gas industry confidently expects to make a strong bid for its share of the profitable air conditioning market in 1940.

Large Natural Gas Well Struck

A NATURAL gas well with an "open flow" of 12,000,000 cubic feet a day was brought in December 17 near Andover, New York. Officials of the Penn-York Natural Gas Corp., owners, said they believed they had tapped a new pool when they struck gas on the Padden estate, a mile southwest of the Alleghany County village.

The nearest natural gas well is seven miles from the new well. Gas was brought in when drillers reached a depth of 4,728 feet under a rock pressure of 2,000 pounds a square inch.

Old Stove Round-Up Sells CP Ranges

WITH one community, Sheboygan, selling CP to 30% of its gas range sales during the period, the Wisconsin Public Service Corporation completed another Old Stove Round-Up on November 27.

In all, 302 gas ranges were sold in three major cities (Oshkosh, Green Bay and Sheboygan) and several smaller communities (mainly Stevens Point, Two Rivers, Plymouth, Peshtigo) representing 111% of the quota. Combining the Fourth Annual Old Stove Round-Up with a special drive on CP models resulted in some exceptional sales.

The leading salesman, Arvin Olson, Sheboygan, reached National CP Ranger classification as he split his total for the campaign period with 14 CP models and 18 conventionals. Since the campaign closed, the momentum Olson created in driving to his lead position has resulted in several other CP sales.

The Sheboygan division closed the campaign in first position with 98 sales against a quota of 68. Of the total 29 were CP models.

New users accounted for 116 out of the campaign total with replacement sales at 137.

with apologies to LIFE

The MONTHLY

Noses counted, agenda read—and a blue-ribbon committee swings into action. "Gentlemen, we're here to help make an annual $250,000,000 worth of industrial gas business even bigger. Left-to-right around the ring, what's your idea on how to start?—E. L. Stauffer, South Carolina Power . . . Albert A. Schuetz, Milwaukee Gas Light . . . George F. B. Owens, Brooklyn Union . . . Eugene D. Milener, American Gas Association . . . H. Carl Wolf, Atlanta Gas Light . . . Frank H. Adams, Surface Combustion . . . Malony, Bridgeport Gas Light . . . Franklin T. Rainey, Ohio Fuel Ga C. F. Henness, Public Service of Northern Illinois . . . Christy Payn Peoples Natural Gas . . . and George Duane, Dayton Power and Each of you is captain of non-residential sales activity in his territory— a nationally representative body—what, for example, would help *you*

Industrial sales spirit runs high at A.G.A. committee meetings, even before the gavel sounds. When Chairman Wolf appears, almost choked with plans-on-paper protruding from inside pockets, he finds Schuetz and notes, Payne and pipe, Rainey and grin, Owens and cigarette—all on deck with ideas up the sleeve. North, South, East and West, manufactured and natural gas properties, big and not-so-big communities, top executives and sales department heads—all represented in one picture. That's the way committees make sure that their action fits the *whole* gas business, not just a fraction of it.

Message from the Managing Committee, via Rainey, Chairman, Ind Gas Section, outlines what the non-residential gas fraternity expects fro new group, how work should blanket *all* sales possibilities, filling in other Section activities can't reach and producing general *sales* data only ucational and promotional plans are part of the picture", he notes. "I kn a million-dollar special-rate account taken only 'to tide over the depr and be refused with good times'. That 'temporary' business is still serve is now bread-and-butter. It should have been deemed so in the first pla

goes to a Committee Meeting

Atlanta's Wolf organizes new General Sales Committee to evaluate industrial load, help non-residential sales managers

SOMETHING unusual in committee work happened when H. Carl Wolf, President, Atlanta Gas Light Company, called the new General Sales Committee of the A.G.A. Industrial Gas Section to order at the Hotel Commodore, New York, December 4, and set it to work defining objectives and planning activities for a new brand of service to the growing non-residential sales branches of our industry.

Most committees of the Section to date have been specialized or "vertical"—have worked chiefly to supply industrial sales-engineers with facts, figures and plans of a specific (and often technical) nature on only one corner of the gas-for-business market. But the new General Sales Committee will be entirely "horizontal", will stick only to the broader sales angles, will dish up its findings so that the top men can digest the industrial sales situation with general company policy, the Board-of-Directors, and the Stockholders in mind—and while waiting to catch the 5:20.

Duane (top right) rises to move that the Committee gear its plans to two major jobs: (1) fully to evaluate the industrial load (and where it's heading) on a national basis so that for the first time the whole industry can study it like a map of Europe, and (2) to give the non-residential sales manager information and ideas to use when he sits down with the boss to chart his local blitzkrieg. Owens, Milener, Wolf, and Adams (next below) give the situation serious thought, while Payne knocks out his pipe with, "We have won the position of first-choice fuel in many industries—we can do it in others—how?—that's our job!"

Veteran heads gather around Industrial Gas Section publications and committee reports (below) to consider a plan of squeezing out the best sales "juice" and concentrating it for an industry "hypo"; and Malony (bottom of the page), who taps a pencil to emphasize his idea of a common sales approach for all committee activity by the Section, gets appointed as chairman of a subcommittee to tackle the job.

After it's all over, Schuetz pours a glass of water to clear his throat, as Wolf laughs at his own joke about bald-headed men—and ash trays, cigar butts and doodle-sheets are left to vouch alone for the ground covered by 11 man-days of hard work.

What Are They Thinking . . . About Gas Ranges?

By Arthur Hirose

Director of Research, The McCall Corporation

I'VE been asked to tell you the truth about this range market, from the detached, impersonal viewpoint of a market researcher and a market analyst—something I've been for over fifteen years. My job is to give you the basic facts and figures on the gas range market so that you can yourselves decide whether or not this is a good business you're in—whether it's a business that merits further effort and study on your part—or whether you ought to be out looking for a likely spot in which to bury the corpse.

America's No. 1 Salesmen

The title of this talk is "What Are They Thinking about Gas Ranges?" and I imagine some of you are wondering who "THEY" means. Properly this talk should answer the question, "What Are Women Thinking about Gas Ranges?", since it is women who decide the destinies not only of the gas range business but of pretty nearly every business that serves the consumer. Dr. Donald A. Laird is authority for the statement that women buy over 85% of all consumer goods. But not only are women the great *buyers* of consumer goods, they are also the great *sellers* of consumer goods, including gas ranges.

I have a friend who calls women "America's Salesmen Number One." Why does he call women "America's Salesmen Number One"? Simply because if a women once makes up her mind that she wants a product you sell, she will move heaven and earth—and maybe hell, too—until she gets it. If she wants a new gas range she sells the idea to the old man and just to make sure, she sells the idea to Junior and Little Sister, too, just for good measure.

So what women are thinking about gas ranges vitally affects your business and that of the retailers to whom you sell.

One indication of what women are thinking about gas ranges comes to us from statistics. Back in the dear dead days of 1929, women expressed their approval of gas ranges to the extent of buying 1,600,000 new gas ranges. Then came the great depression and in 1932 things were so bad that the industry sold only 628,000 gas ranges. But gas range sales quickly recovered and each year more and more gas ranges were sold until we came to 1936 when 1,464,000 new gas ranges were sold to Mrs. America.

Sales fell off in 1937 somewhat and last year, which was a poor year for all home appliance sales, saw only a million gas ranges sold. Wiseacres stepped in at that point and chortled, "I told you so—the gas range is doomed." And to the uninitiated that sounded plausible. After all, when 1938 had ended and this year of 1939 had begun there were a little more than 16,000,000 domestic customers of the gas companies and there were almost 16,000,000 homes with gas ranges. One hundred per cent saturation looked pretty close by.

Range Sales Impressive

Did gas range sales go all to pot in 1939? They did not—America's Salesmen Number One, saw to that. Egged on by you gentlemen and your fellow conspirators, women were persuaded to buy almost a million more gas ranges in the first nine months of this year—974,828 new gas ranges, to be exact. In the first nine months of last year only 737,000 new gas ranges had been sold, so on that basis we estimate that 1939 will see total sales of gas ranges amounting to about 1,300,000 or an increase of 32%. What do women think of gas ranges? They like 'em fine!

What about the threat of electric cookery and electric ranges? What are the facts about that big battle between gas and electric ranges? I'd be a dope if I stood before you and belittled the electric range. So let's look at the picture without getting purple in the face. Instead let's face facts.

In 1933, when 711,000 gas ranges were sold, only a miserable 50,000 electric ranges were sold. But last year, when 1,000,000 gas ranges were sold, 275,000 electric ranges were sold. This year when the gas range people will probably sell 1,300,000 gas ranges, the electric range people will probably sell 330,000 electric ranges.

Gas Ratio Improves

This means that while 1939 *gas* range sales will probably exceed 1938 gas range sales by 32%, 1939 *electric* range sales will exceed 1938 electric range sales by only 20%. Furthermore, the ratio of gas range shipments to electric range shipments for the first nine months of 1939 stands at 404 gas ranges sold to each 100 electric ranges sold, which is a much better ratio than for the same period last year when only 364 gas ranges were sold to each 100 electric ranges.

What is responsible for this improved sales position of the gas range over the electric range? Among other factors, I think you gas range people have the electric range people to thank. In my work as a research man and a market analyst, I've noticed that industries have a habit of getting soft, of accumulating fatty tissue around the waist, particularly if they're industries that are doing a pretty good job turning out a product that has real merit and is wanted by consumers.

Then along comes the villain in the plot—the new competitor. For a time there's deep but rather inarticulate in-

Talk delivered to the Detroit-Michigan Stove Co., December 4, 1939.

dignation on the part of the older industry at the thought of a newer and a younger product thinking it can cripple the older industry's position. There's also the stage when the older industry blusteringly says the new product won't last—it will never make the grade. Finally if the older industry is smart, it probes deeply into its own product and things begin to happen.

That is just what happened finally in the gas range industry. When you really looked into gas ranges, you found they could be improved. You've improved them and you've continued to improve them. Out of these product improvements, perhaps some of them long delayed, you found you had a newer and a better story to tell. And the gas range industry has been telling that story of the new wonders of gas cookery. The CP gas range was developed. The American Gas Association is now starting the fourth year of its joint national magazine advertising campaign to sell Mrs. America on gas cookery. Half a million dollars will be spent for that purpose in the next twelve months.

Keeping Mrs. America Sold

Will electric ranges wipe out gas ranges? Will the 16,000,000 users of gas ranges trade them in for electric ranges? Not if you keep improving your product as you have done and keep telling your story to Mrs. America. And when you tell a truthful, consistent, interesting story to Mrs. America, she listens and she remembers.

Last week I spent a crowded hour with two of the men who handle the advertising for the joint gas range magazine advertising campaign. They showed me the results of two surveys among women in America on the subject of gas ranges. One survey was made in 1937 and the other survey was made only this year. It was reassuring to see evidence that the story of the improved gas range is clicking with women. In this year's survey they were far more conscious of the gas range's features of speed, cleanliness and economy than they were two short years ago.

It seems to me that another way you can insure the continued success of gas range sales is to recognize and foster the replacement market—sell more new and better gas ranges to the women who now have outworn and obsolete gas ranges.

Let me give you some observations on the replacement market that will show you, I think, that the replacement opportunity can be expanded if you and your retailers go after it. Let's take vacuum cleaners, for instance. The vacuum cleaner people sold millions of vacuum cleaners to women. The vacuum cleaners did a good job. The women were satisfied with them. So the vacuum cleaner people sat back and said, "When these vacuum cleaners wear out, we won't have to worry the women will just come down town and buy new vacuum cleaners."

There was only one thing wrong with that theory, the women didn't. Instead some bright lads from Sweden brought over to America a funny looking vacuum cleaner, which they took around to the women of America. They said, in effect, "Look, lady, here's a brand new vacuum cleaner with all these improvements. Why it makes that old vacuum cleaner of yours look and act like a broken down has been. Why don't you junk that old cleaner of yours and buy one of these new ones?" And the surprising thing was that hundreds of thousands of women did just that very thing. They knew in a dim way that the old product was worn out and obsolete, but they did nothing about it, until someone told them to.

So it is with gas ranges. There are millions of gas ranges in the kitchens of America that years ago should have been retired. But they won't be until someone suggests it to women.

Let me show you why women of their own volition won't replace their old ranges unless they're urged to. Remember that there's great competition for the consumer's dollar these days. The replacement business in gas ranges will not come to retailers in large volume unless they go out after it.

Market Study

For instance, the McCall organization made a study in representative middle class and upper class families throughout the nation, asking the question, "What is the next important major purchase or expenditure you want to make?" When the answers to this question were tabulated here were the answers:

1st —Furniture and rugs
2nd—Vacation and travel
3rd—New automobile
4th —New refrigerator
5th —Household repairs and improvements
6th —New clothes
7th —New home
8th —Fur coat
9th —Clothes washer
10th —Vacuum cleaner
and 11th —New range

For the magazine *Sales Management,* the Ross-Federal Research people asked middle class families in 8 cities, "What out-of-the-ordinary purchase are you likely to make first?" Here are the answers:

1st —New automobiles
2nd—Refrigerators
3rd—Trips and vacation
4th —New homes
5th —Furniture and draperies
6th —New radios
7th —Fur coats
8th —Rugs and carpets
9th —Home improvements
10th —Clothes washers
and 11th —Gas ranges

It will soon be Christmas. In six cities the Scripps-Howard newspapers recently asked 11,000 people, "What single Christmas gift do you want most

Manufacturer Joins National Advertisers

AT the recent annual sales convention of the Detroit-Michigan Stove Company announcement was made of a national advertising campaign on Detroit Jewel and Garland gas ranges to run throughout the year in "McCall's," "Saturday Evening Post," "Woman's Home Companion" and "Good Housekeeping." The 1940 advertising theme will capitalize upon the company's seventy-six-year-old reputation for "better baking ranges."

The new advertising theme is expressed in the phrase "Picture-Book Baking." This theme is incorporated in direct-by-mail and newspaper advertising and point-of-sale display material, as well as national advertising to convey the idea that Detroit Jewel and Garland ranges produce the kind of baking results women see pictured in the magazines and recipe books.

A number of innovations in the new line were announced, most important being the addition of a number of new models in the low-price field.

for your family or home?" When the answers were tabulated, here was the ranking for household equipment:

Living room furniture—first
Rugs—second
and gas ranges—third

In Chicago, the DePaul University made an interesting study among over 10,000 families, asking them, "What do you plan to buy next?" This study disclosed:

Vacuum cleaners in 7th place
Refrigerators in 9th place
Clothes washers in 15th place
Electric clocks in 17th place
and Ranges in 20th place

You can see from these surveys that if the gas range people let nature take its course, too often gas ranges will lose out to other purchases that get to the family pocketbook first.

Replacement Opportunity

What is the real replacement opportunity on gas ranges? You can take the case of my home and multiply it by the millions and you have the true gas range replacement market. We live in a typical seven-room house that we bought twelve years ago in a representative community of 15,000 people. When we bought our home, we bought a new gas range. It has given us splendid service. But it's 12 years old and has few of the features that a modern gas range possesses. If the gas appliance dealers in our vicinity had been on their toes, they would have followed up the gas range advertising that my wife has been reading in magazines all these years and would have sold her a new gas range.

Why am I so sure that they could have done it? Simply because in the last few years my wife has been sold many other new appliances less fundamental than a new gas range. She's bought an electric roaster, an electric coffee maker, a new automatic gas water heater, an electric coffee grinder, an electric reducing roller and an oil burner. And in the spring we bought a new car and this fall we bought a new fur coat—not for me, I need scarcely add.

American women will replace their gas ranges with new ones in larger volume if the gas range industry will only ask them to often enough.

And remember, it's a lot easier to sell Mrs. Homemaker her second gas range than her first one. For proof I refer you to the automobile business which centers in your own city of Detroit. The automobile business today is a replacement business. Few cars these days are sold to people who up to now have resisted buying a passenger car. Most of the sales are made to families that already have an automobile. I ask you, which would you rather be, that early automobile salesman 25 years ago who was trying to sell an auto that might or might not run to a timid family that had heard all about the dangers of motoring and those new-fangled horseless buggies or would you rather be the auto salesman of today who can present an improved, perfected product of unquestioned value to a family that knows from experience what a car will do for them. The parallel with the gas range replacement business is there.

(Continued on page 38)

Biscuits Help Salesmen Close Sales

Courtesy Blue Blaze News

Biscuits help new business solicitors of the Dallas Gas Company make range sales. Prepared biscuit dough is on hand in a gas refrigerator. A salesman takes his customer to a connected CP range, puts a couple of biscuits in the oven, sets the temperature control and reminder, and while the biscuits are cooking in the range, takes the prospect over to a similar model for a thorough demonstration of the new range. The perfectly browned biscuits, cooked by the salesman himself, are used as the climax to the sales talk . . . . and in a number of cases very successfully. The picture shows salesman F. M. Pope demonstrating the capabilities of a CP range to Mrs. Jack Fatherree, Lone Star Gas Company employee, a prospective customer

Holiday Wrinkle

This unique and effective Christmas window display of the Citizens Gas and Coke Utility, Indianapolis, Ind., is achieved by a mixture of stale beer and epsom salts, according to G. A. Saas, advertising manager. When painted on glass, the mixture will crystallize into what appears to be frost and, while washable, stays on the windows permanently. It creates a translucent effect even where the windows are covered up and the design can be in keeping with the season. It is said to be inexpensive and easy to apply

Brooklyn Makes Record Refrigerator Sales

THE Brooklyn Union Gas Company on December 15 announced that 21,000 gas refrigerators had been sold in its territory during 1939, thus reaching the goal set for the company's "Ring-a-Million-Doorbells" campaign. With employees, salesmen and dealers participating, a new gas refrigeration record was established. It is reported that this is the greatest total of gas refrigerators sold by any company in the United States this year.

Stone & Webster Marks Fiftieth Year

STONE & WEBSTER, INC., founded in 1889 by Charles A. Stone and Edwin S. Webster, celebrated the firm's fiftieth anniversary on December 20.

The founders, both graduates of Massachusetts Institute of Technology who set themselves up as consulting engineers, expanded into a national organization whose services today include engineering construction for all types of industry, the underwriting and distributing of securities and the supervision of gas, electric and transportation properties.

In its fifty years of business, Stone & Webster has completed construction work costing more than $1,000,000,000 and has appraised properties having a total valuation of approximately $12,000,000,000. In addition, it has participated in many billions of dollars of securities underwriting and is now supervising utilities whose annual gross earnings are more than $64,000,000.

Personal AND OTHERWISE

American Standards Group Elects Officers

THE annual meeting of the American Standards Association was held Wednesday, December 13, at the Hotel Astor, New York City. New officers announced by Dr. P. G. Agnew, secretary, are as follows: Edmund A. Prentis, president; R. E. Zimmerman, vice-president; R. P. Anderson, chairman, Standards Council, and H. S. Osborne, vice-chairman, Standards Council.

In the address of the president, Howard Coonley, it was brought out that the work of the association has expanded rapidly. It was reported that 405 American Standards had been approved to date and that the committee members of the association number nearly 3,000.

R. B. Harper, vice-president, The Peoples Gas Light & Coke Co., Chicago, who represents the American Gas Association on the Standards Council, was present in addition to Charles A. Lunn, Consolidated Edison Co. of New York, and A. S. Miller, who represents the A. G. A. on several important projects. Members of A. G. A. headquarters staff who attended were: Alexander Forward, managing director, H. W. Hartman and A. Gordon King.

Advertising Director

E. C. WHITCOMB, new business manager for Fort Worth division, Lone Star Gas Company, was elected a director of the Tenth District, Advertising Federation of America, on November 3 at the close of the district's annual convention in Houston. The tenth district covers Texas, Oklahoma and Louisiana.

F. H. Sargent Honored

FIFTY years of devotion to the interests and development of a large enterprise was eulogized on the evening of November 17 when 350 employees of the Lawrence Gas & Electric Co., Lawrence, Mass., gathered to pay tribute to Fred H. Sargent, president and agent of the company, in honor of his golden jubilee of service. Mr. Sargent was presented with a beautiful diamond-studded fifty-year service pin and with a guest book containing the names of all present at the banquet.

Mr. Sargent started to work as a clerk at the gas plant on Marston Street on November 26, 1889 and rose through various positions in the company until February 3, 1927 when he was appointed president and agent. He is a member of the American Gas Association, New England Gas Association, Society of Gas Lighting, Guild of Gas Managers, Edison Electric Institute and Engineers' Club in Boston.

United Light & Power Names Conrad

Frank L. Conrad

FRANK L. CONRAD, vice-president of the Michigan Consolidated Gas Co., has been named vice-president of United Light & Power Co., parent organization of American Light & Traction Co. and Michigan Consolidated Gas. He will continue to make his headquarters in Detroit.

Mr. Conrad, widely known as a consulting engineer, was at one time connected with the legal department of the City of New York and for a number of years was associated with the engineering firms of William G. Woolfolk & Co. and Sanderson & Porter. He first went to Detroit in a consulting capacity but became a director and vice-president of Michigan Consolidated Gas nearly two years ago. He is also a director of United Light & Power Co.

Whiteford Elected Head of Associated Group

ROGER J. WHITEFORD, at one time general counsel of the Federal Housing Administration, was elected president, general counsel and director of the Associated Gas and Electric System on December 12, succeeding J. I. Mange, who resigned because of ill health.

The election of Mr. Whiteford was announced following a meeting of directors in Washington. It is regarded as one of the first steps toward a reorganization of the company's management preparatory to the readjustment of its structure, operations and securities to conform to the public utilities holding company act of 1935.

Carey Named Counsel

THE Philadelphia Electric Company announced, through Horace P. Liversidge, president, the appointment of Bernard P. Carey as general counsel in charge of the legal department, succeeding the late Arthur B. Huey.

Mr. Carey entered the employ of the company in 1913 as a clerk. During his off-duty hours he studied law at Temple University, being graduated in 1924 and admitted to the bar in the same year. In 1928 he was appointed counsel in the company's legal department.

He is president of the Pennsylvania Electric Association and a member of the American Bar Association and American Gas Association.

Veteran A. G. A. Member Is Dead

EUGENE METZ, 71 years old, resident manager in Kansas City the last thirty-five years for the American Meter Company, died recently.

Mr. Metz was one of the first members of the Natural Gas Association of America and one of the oldest members of the American Gas Association. He was a member also of the Southwestern Utilities Association and the Middle West Gas Association. He was the second oldest man in his company's employ.

World's Fair Home Designer Dies

Dwight James Baum

DWIGHT J. BAUM, one of the country's most distinguished architects and designer of Homewood, the All-Gas Good Housekeeping model home at the New York World's Fair, died December 13 in New York following a heart attack. He was 53 years of age.

Mr. Baum appeared on the general sessions' program of the American Gas Association convention in Cleveland in 1937.

Although he had designed many great buildings and memorials, Mr. Baum never allowed this work to overshadow his love for a small, well-planned home. In 1932, he won the gold medal for the best-designed small house of two stories built in America between 1926 and 1930. He was one of the architects for the New York World's Fair and won honorable mention in the Fair's architectural competition.

Members of the Hutchinson Gas Club at a meeting in New York on Dec. 11. Left to right, seated: Walter C. Beckjord, A. G. A. president, J. R. Wohrley, C. R. Bellamy, Ray Ranson, E. J. Murphy, L. O. Gordon, E. Taylor, Ross Holmes, R. Van Vliet, Fred B. Parke, A. B. Huyck, and S. P. Cobb. Standing: Floyd Parsons, F. L. Fairchild, J. D. Alden, A. I. Phillips, Alan Lockwood, H. L. Gaidry, and Oliver Hagerman. (Present but not in the picture, A. Gordon King, who took the photograph)

Natural Gas Section Makes Plans for Convention

IN order to formulate plans for the year's work as well as the program for the annual convention at Houston, May 6-10, the General Program Committee and other committees of the Natural Gas Section met in Chicago on December 11.

In the absence of General Program Chairman Harry D. Hancock, Gas Advisers, Inc., and vice-chairman of the Natural Gas Section, Thos. R. Weymouth of Columbia Gas & Electric Corp. and past chairman of the Natural Gas Section, presided.

Chairman George S. Young of the Michigan Gas Transmission Corp. presided over the Transmission Committee and J. French Robinson, The Peoples Natural Gas Company, chairman of the Production Committee, presided over that meeting. The Domestic Natural Gas Sales Committee was headed by its chairman Davis M. DeBard of Stone & Webster Service Corp. Franklin T. Rainey of The Ohio Fuel Gas Company presided over the Industrial Natural Gas Sales Committee of which he is chairman.

Technical Program

The program of the Transmission and Production Committees is cast along practical operating lines in connection with new developments of their respective activities. The sales committees have outlined a program in keeping with the tempo of the promotional activities of the American Gas Association as applied to the natural gas industry.

These committees have done an invaluable piece of work in assembling suggested subjects and speakers and the abundance of these suggested subjects and their wide application to problems and developments in the natural gas industry promise an unusually vital convention. There are many indications that the 1940 meeting will break another record in quality, variety and interest.

It was announced at the Chicago meeting by C. H. Waring of the Kansas City Gas Co., chairman of the A. G. A. Distribution Conference, that the annual meeting of that group will be held jointly with the Natural Gas Section in Houston.

Gas-Filled Balloons Fuel Autos

EXPERIMENTS are being made in Norway in the use of gas as motor fuel, according to a report from the American consulate-general in Oslo, made public by the Department of Commerce. It is expected locally that the war will result in sharply curtailing Norwegian supplies of gasoline, the report points out.

One of the local engineers recently demonstrated an automobile in Oslo having a gas-filled balloon fastened on the roof of the car. The gas from the balloon is conveyed through a rubber hose to the carburetor which requires only a slight adjustment for the new type of operation.

The manufacture on a large scale of gas balloons for automobiles is now under consideration, the report said.

CONVENTION CALENDAR

JANUARY

Jan. 12-13 **Public Utilities Advertising Association**
Cosmopolitan Hotel, Denver, Colo.

22-26 **International Heating & Ventilating Exposition**
Cleveland, Ohio.

24-25 **American Management Association, Finance Division**
New York, N. Y.

FEBRUARY

Feb. 12-14 **Southern Gas Association—Southern-Southwestern Regional Gas Sales Conference**
Arlington Hotel, Hot Springs, Ark.

15-17 **Mid-West Regional Gas Sales Conference**
Palmer House, Chicago, Ill.

Feb. 29 and Mar. 1 **Eastern Natural Gas Regional Sales Conference**
Fort Pitt Hotel, Pittsburgh, Pa.

MARCH

Mar. 14-15 **New England Gas Association**
Hotel Statler, Boston, Mass.

APRIL

Apr. 9 **New Jersey Gas Association**
Asbury Park, N. J.

11-12 **Accounting Section Spring Conference**

15-17 **Mid-West Gas Association**
Lincoln Hotel, Lincoln, Nebraska

16-18 **Southwestern Gas Measurement Short Course**
University of Oklahoma, Norman, Okla.

17-19 **Missouri Association of Public Utilities**
Elms Hotel, Excelsior Springs, Mo.

21-23 **Gas Meters Association, Florida and South Georgia**
Hollywood Beach Hotel, Hollywood, Fla.

Apr. 29-May 2 **U. S. Chamber of Commerce**
Washington, D. C.

MAY

May 6-10 **Natural Gas Convention**
Houston, Texas

6-10 **Distribution Conference**
Houston, Texas

8-11 **National Fire Protection Association**
Atlantic City, N. J.

JUNE

June 4-6 **Edison Electric Institute**
Atlantic City, N. J.

JULY

July 3-5 **Canadian Gas Association—Joint Meeting with Pacific Coast Gas Association**
Jasper Park Lodge, Alberta, Canada

OCTOBER

Wk. 7 **American Gas Association, Annual Convention**
Atlantic City, N. J.

Reality in Accounting

By Dr. Thomas Henry Sanders

Professor of Accounting, Graduate School of Business Administration Harvard University

Dr. Sanders

It is not an accident that regulatory commissions everywhere have seized upon accounting as one of the most effective implements of supervision and control over the operations of the companies under their jurisdiction. By the same token those who have the responsibility for the actual management of these companies will wish to avail themselves of the same tools, for the accounts present the most succinct summaries of their operations and results.

It is true that executives of varying experience have varying degrees of ability with which they use accounts as a means of control, and grasp the significance of the figures in terms of good or bad operation of their enterprises. But a lack of this ability is not a thing to boast about, as some men like to do; it represents a deficiency in managerial equipment which, if an executive is to be successful, he must make up with superior skill in engineering, in marketing, or in some other line of creative activity.

Good Accounting Requirements

It is therefore reasonable to ask business executives to take their accounts seriously. Here I come to the proposition which suggested the title of this paper, and which is the dominant thought which I would bring to this meeting, namely, that the first requirement for all good accounting is that it be based upon, and fairly present, the realities of the situation. At first sight this will appear to be a superfluous truism, until we remember that the technicalities of accounting procedure, and the legalistic framework in which the accounts must be prepared, furnish continual temptation to be satisfied merely to comply with the technical requirements, even though the realities of the matter may be very inadequately dealt with.

Let us consider some of the accounting problems of corporate enterprise in general. The capital stock of a corporation is one of its essential features; it represents the company's legal capital, and is an important accounting concept. But the law and corporate finance are such that a good many tricks may be played with capital stock, if one is so minded. The latitudes of the law have the legitimate and entirely desirable purpose of facilitating necessary corporate business and readjustments, and the accounting for them; but when this freedom is availed of to accomplish financial and accounting gymnastics which get far away from reality, and introduce elements of elasticity, if not of fiction, into the picture presented by the accounts, the realities are too often lost sight of.

Capital Stock Issue

Take for example the issue of capital stock for property, or for the stock of another company. Here the restraining influence of a cash basis is absent; and though in exchanging stock for stock men will argue energetically about the ratio of the exchange, yet they may be much less careful about the aggregate amounts. That is, they will be concerned as to whether 1 share of Company A shall be exchanged for 2, 2½ or 3 shares of Company B, but when it has been agreed that the ratio shall be 1 to 2½, it is still possible to express that ratio as $1,000,000 to $2,500,000, or $2,000,000 to $5,000,000, or in other amounts with the same ratio, according to the valuation placed upon the shares being acquired. Only the sense of restraint of company officials will intervene to keep them from excesses which are far from any reality on a cash basis, but not to exercise these restraints is to invite distrust and condemnation for the company accounts.

Similarly, when property is acquired and paid for in company stock, a greater elasticity of values is likely to appear than in a strictly cash transaction. If the stock has a regularly quoted value the problem is helped somewhat, but the wide swings of security prices still leave an extensive range of choice. For a well-established company neither the extreme highs nor the extreme lows can be accepted as affording a satisfactory basis; nor are the quoted values of the day necessarily right. One is once more forced back upon the concept of a fair value, a reasonable value "all things considered," which means that the answer is not in the literal interpretation of any one set of facts, but in the judgment of reasonable men informed of all the facts.

The laws of many of our states allow the use of no-par stock, and they permit a company to reacquire its own shares, sometimes with certain limitations. In England neither of these procedures is allowed; they consider that no-par stock is altogether too subject to abuse, and that the reacquisition of a company's own stock is in effect a reduction of its legal capital, a step requiring prescribed legal procedure. These considerations point the dangers inherent in such devices, but in spite of the dangers they are available to most American companies. They furnish certain conveniences and flexibilities to those responsible for company finance, but it follows that they should not be abused.

The accounting rule that reacquired stock shall in the balance sheet be subtracted from capital stock outstanding is designed with these considerations in mind. As to no-par stock, the facility which it offers to state the capital stock item at almost any amount at the discretion of the directors, with the balance attributed to surplus, should not encourage directors to abandon all discretion and become capricious with respect to an item which fundamentally should show the investment of the shareholders in the company. It is true that legal and financial complexities render this a hard thing to do; but directors should not take too much advantage of these to get away from realities.

Surplus Distinction

The mention of surplus brings up the problem of the distinction between capital surplus and earned surplus. From the point of view of the balance sheet they are both surplus—the excess of the net assets over the stated capital. But as an aspect of earnings—on which accounting places more and more emphasis—there is obviously a wide difference between undistributed earnings of the company, and amounts paid in by the stockholders in excess of stated capital, but still part of their investment in the company.

This is a real distinction and should be maintained. But having said that, it is proper to add that there is a tendency in some quarters to magnify this distinction, especially when there is any question about so-called capital surplus from reappraisal of assets. Many accountants would like to exclude this kind of item from the surplus category altogether, and follow something akin to the British practice of regarding it

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as a reserve rather than surplus. But the efforts of some regulatory commissions to rake over old surpluses in an endeavor to ascertain if they are pure earned surpluses, or if some admixture of capital surplus has crept in, cannot be regarded as fruitful activity.

A few years ago the New York Stock Exchange adopted a rule with respect to the accounting for stock dividends, declared by a company which has a capital surplus. It is not necessary to trouble you with the technicalities, but the purpose of the rule is to prevent directors from taking advantage of the elastic qualities of these items and thus be in position to increase the apparent amount of stock dividends which they can declare out of a given amount of surplus. It is plain that this is a real consideration, and should have the support of all company officials who believe in reality as against make believe.

A. I. A. Bulletins

It is perhaps worth while to call attention to the new series of bulletins which have just begun to emanate from the American Institute of Accountants. Through its committee on accounting procedure the Institute has undertaken to issue statements dealing with problems of accounting procedure. These statements are to be issued only after a good deal of study by the committee, and by the Institute's research department, and it is hoped to accumulate a literature which will serve to clarify these vexed problems and tend to crystallize opinion about them. The first two of these statements, published on September 1, deal with the treatment of unamortized discount on an issue of bonds retired by refunding, and with the procedure in quasi-reorganization, when a company undertakes a considerable restatement of its asset values and capital position.

Some of you will be disposed to reflect that these questions are settled for you in the uniform accounting systems of the regulatory commissions, and to some extent this is true. But in the first place the systems of the different commissions differ among themselves; in the second place it may be taken for granted that in so far as the systems are in conflict with sound business and accounting they will be changed. It is therefore still pertinent to ask what are the realities of the various problems, and to believe that these realities will prevail even against commissions. The statements of the American Institute just referred to were accompanied by a general statement of program and viewpoint, evidently issued with the thought that if there could be more agreement about objectives, then more uniformity of method would follow.

How, then, do the special accounting problems of a public utility appear from this viewpoint? These problems are first the accounting for property, and second the accounting for depreciation. I do not include here the problem of valuation in rate proceedings, which is something quite other than accounting.

Activities of the Accounting Section for the year 1940 which were discussed at the organization meetings held in Chicago recently will be covered in detail in an article in a later issue of the MONTHLY.

The primary basis of accounting for property is cost to the present owner. On this proposition there is almost general agreement both among practical accountants and among writers on theory. There is in many cases a considerable problem of determining what cost means for this purpose, but such questions are problems of definition which in no wise challenge the basis itself. There can be little doubt that this is one of the realities that it is in the interests of business to maintain and preserve, and business men should be cautious about encouraging any practice not in harmony with it. The whole idea of responsibility which is at the basis of accounting comes up in the responsibility of management to account for the amounts invested in property, and to maintain those investments by adequate depreciation policies.

Original Cost Theory

What then is the place of original cost to original owner, rather than to the present owner? It may be said at once that it is out of harmony with the basic principle already stated, and its justification, if any, is to be found not in accounting but in theories of regulation. In so far as it is accepted, it implies that the public authority undertakes to regulate not merely the individual utility companies but the industry also, regardless of the particular legal entity which may conduct the business from time to time. This is not the occasion to discuss that theory, but certain observations may be made upon its accounting and financial consequences.

In so far as these regulations require merely a subdivision of the property accounts to show both the cost to a former owner and the cost to the present owner, and in so far as the total of the latter may be properly depreciated by charges against income, there is little to quarrel about except the cost and trouble of providing the extra information, which may be considerable. In these circumstances it cannot be said that the basic principle is violated, provided the situation is stated is understood and frankly acknowledged by all concerned. But if the regulations portend that part of the investment of a present owner may be disallowed, or debarred from proper depreciation, that may be presumed to be something which the company concerned would be bound to resist, as defending its own property, and it could not be considered as in harmony with sound accounting.

Such a position could be maintained only by attacking the genuineness of the investment itself, and we are brought back again to the question of the realities of the situation. If it could be successfully shown that the so-called cost was paid in stock at inflated values, or was the result of collusive bargaining between related companies not acting at arms length, the additional values as between the present owner's investment and that of a former owner would doubtless be held to be fictitious. But there is no justification for regarding all such transactions as suspect.

When a parent and a subsidiary company both have substantial outside interests, it is the duty of each management to safeguard those interests in any transactions in which they may be involved, including transactions between themselves. A regulatory commission would and should be very ready to intervene in any case where it appeared that minority interests were being neglected in any transfer of property between related companies. Furthermore it is natural that changing conditions should from time to time necessitate transfers of property between related companies. If these transactions are honestly carried out the price agreed upon is a genuine cost to the new owner, and no accounting devices should be permitted to prevent the due protection and maintenance of the investment.

Such considerations re-emphasize the importance of a sound basis for property accounting in all lines of business; whatever procedures have the effect of introducing a dubious or false note are to be avoided, and business men should recognize the desirability of doing everything they can to build up confidence in and respect for their property accounts. It can be done only by a faithful adherence to a genuine cost or investment basis.

Depreciation Accounting

Since it would be presumptuous to pretend to deal adequately with the large question of depreciation in a few minutes, permit me to state what seems to be the essence of the situation in a few simple words. The ultimate purpose of depreciation accounting is the maintenance of the investment; the difficulty of doing this is increased in proportion as wear and tear become relatively less of a factor, and functional depreciation due to obsolescence looms larger.

Experience shows that the problem has in the majority of cases consisted in providing an adequate depreciation, though it is true that in some instances too much has been provided. Experience further shows that the safest and simplest basis for providing adequate depreciation is the straight-line method; in this country an overwhelming preponderance of industrial companies practice it, and in England there is a marked trend towards it.

When, therefore, a retirement accounting method is proposed, the natural question is whether it provides as complete a main-

(Continued on page 39)

Reaching the Low-Use Customer

By HUDSON W. REED

Executive Vice-President, The Philadelphia Gas Works Co., Philadelphia, Pa.

Hudson W. Reed

IN introduction it must be stated that we in Philadelphia, in common with many other gas utilities, are in a highly competitive market, and we feel that any program for the expansion of gas sales must include promotion in all potential fields. In addition to the better known fields for residential sales, we believe the non-use customers and the low-use customers which, to a considerable extent, includes low-income customers, are worthy of further investigation and sales effort.

In order to better understand our market generally, a customer survey was made involving a representative sample of householders (some 20,000 customers), with the intention of determining the exact picture of our present market, as to the amount of the market held by the gas company and that held by competitive fuels or services. In addition, we wished to obtain the trend of the market and customer preferences as to fuels for various heating purposes. The survey also was intended to indicate where increases in gas sales could be secured and what classes of customers would best repay sales effort.

12,000 Non-Users

For the purpose of this discussion, I am considering only the non-use and low-use-low-income portions of this analysis. The survey indicated that there were some 12,000 homes not using gas service, and approximately 50,000 customers whose gas usage was considered less than the normally profitable level of 10,000 cubic feet per year.

The situation indicated the need of further sales activity to induce the non-use customers to use our most accepted product—the gas range, and in the case of the low-use customer, to obtain increased consumption through the purchase of some additional load-building appliance, such as the gas automatic water heater or gas refrigerator. This low use represented the lower income section of the market, from which we were not obtaining an adequate revenue per customer, and which we felt would justify additional sales effort. This discussion was prepared with the view of outlining the procedure used, and results obtained in approaching these two classes of customers.

Non-User Sales Program

Two sales programs involving non-use customers were made, an exploratory one in 1938, and another of about three times the scope in 1939, with the intention of obtaining as many of these customers as practical, as gas users.

The list of non-users was obtained from meter readers, and all such addresses were contacted by a survey force, to determine the possibility of reinstating gas service. It was found that about one customer in five owed the company an old bill, which was the principal reason for discontinuance. In a number of cases no gas appliances were available, and but limited incomes available for the purchase of such appliances. In a few cases—approximately 10 per cent of those contacted—competitive fuels were directly responsible for the loss of load, but for the most part it was the pressure of economics which forced them off our lines.

About 12,000 premises were visited with the intention of making every reasonable effort to induce these customers to again use gas service. In the cases where customers had an old balance owing the company, payment of such balances was not required if the debt was incurred prior to January 1, 1935. If incurred after that date, full payment was required and was prorated over as long a period as 12 months. When gas service was again established no gas deposits were required. Using this procedure a total of $1,900 in old accounts were reinstated. Seventy-five per cent of these accounts has been transferred on our records into "uncollectible accounts," so their reinstatement represented a substantial recovery of revenue.

Where the customer had a satisfactory appliance, it was re-connected by the company at our regular rates and the customer was billed $1 down and $1 a month. Where no appliance was available the customer was urged to obtain one. There were generally three sources of appliances for such customers. Either a new appliance was purchased at the regular retail price, and standard finance terms applied, or a used range was sold by the PGW with payments of $1.25 down and $1.25 a month for 15 months; or the customer obtained from some relative or used range dealer a satisfactory appliance.

In all a total of 1,517 new customers were obtained of which 27 purchased new appliances at the retail price, 205 purchased used ranges from the company, and the remainder—some 1,275, either had acceptable appliances or obtained them from other sources. These sales surveys have been regarded by us as productive enterprises that have more than paid for themselves in results obtained. They have produced over $22,000 in added gross annual revenue, and from our experience we believe that in another year, another survey, and perhaps even a second one in the following year, could be made of these same customers, before the point of diminishing returns is reached.

Small-Use-Low-Income Customers

Our problem with these customers is to obtain additional gas consumption through the use of additional load-building appliances. The problem, in our opinion, cannot be met with normal merchandising procedures and normal terms, as these customers can only with difficulty stand the combined cost of regular merchandise payments, and the additional operating cost of the appliance. In addition, credit of these customers—being in the low-income class—is likely to be risky.

A study indicated that probably the most successful approach to volume sales of load building appliances to these customers could be made on the basis of reducing the monthly payments by considerably extending the normal finance terms. In the case of automatic water heaters, the program is further strengthened by selling a type of heater which would allow adequate, but not wasteful service, because of the limited demand. Our program therefore involved the approach to these customers through special financing and merchandising plans on automatic water heaters and refrigerators.

Automatic Water Heater Program

In the summer of 1938 a trial was made of selling a modified type of a slow recovery automatic water heater on 5-year terms. The results were sufficiently satisfactory to warrant a repetition of this offer this past

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spring; with the opportunity extended to the purchase of any A. G. A.-approved types of water heaters, regardless of the selling agent or make of heater, provided that the manufacturer of the heater agreed to certain mutual responsibilities as to reverts and guarantees. All such heaters were guaranteed for five years and were sold on 5-year terms.

The campaign on water heaters not sold through the company resulted in somewhat indifferent results so far as increased sales were concerned. This can be traced to the difficulty of stimulating the conventional water heater sales outlets to promotional activity, and while disappointing it is not overly important as almost all such sales were replacements of existing gas automatic water heaters and would be obtained anyway in the majority of cases.

On our own sales, there was a very satisfactory and substantial increase in sales volume which was comparable to the volume obtained under a rental program of several years ago and without the difficulties frequently attending such a rental program. Our revert experience has been unusually satisfactory and testifies as to the acceptable operating characteristics of the type heater used and the advantages gained as to customer retention of appliances when the monthly payments are low.

Heater Type Important

In our opinion, the type of heater sold such marginal customers is very important. We have used a 30-gallon heater with two sizes of heating units—one 5,000 B.t.u. and one 10,000 B.t.u. capacity—of a design that permits the discharge of hot water from the heating unit directly to the top of the tank and gives the equivalent of speedy recovery for small quantities of hot water after a major draw. The smaller heater allows ample capacity for the family of four and the larger heater provides for a family of six or larger. Our sales ratio is about 75% small and 25% large, with the two sizes constituting about 85% of our total water heater sales.

This program, in our opinion, has been successful because:

1. The monthly payments are low and within the means of the middle or low-income classes of customers—$1.00—$1.50 per month.
2. The low down payment—$2.00 or $3.00—makes the heater easy to buy.
3. The low operating cost (average $2.34 a month for family of four, based on 530 B.t.u. gas at 85c per 1,000 cubic feet) places the water heater in the class of relatively low cost appliances.
4. The type of heater used has customer acceptance, through the installation of over 5,000 units which have proved very satisfactory as to operation and cost.

Of necessity our approach to water heating sales was different from our approach on refrigeration sales since the situation was considerably different. Water heaters are as yet unsaturated in the middle class market, and because of the operating costs, the combination of monthly payments, with regular terms, and operating costs was something to cause hesitation, even in the middle class market when compared to the cost and degree of inconvenience resulting from non-automatic sources of hot water. Another reason for a different approach in water heater sales is that outside sales agencies are not aggressive and cannot be depended upon to do a strongly promotional sales job. In consequence, we thought it necessary only to provide sufficient mark-up to cover our own costs with a nominal 20 per cent discount to sales agents for the sale of water heaters. By combining the lower first cost with 5-year terms, it is possible to bring the monthly payments on water heaters down, not only to the middle class but to the lower income class level, and this combined with an economical type of automatic gas water heater is, in our opinion, directly traceable to the sales results obtained.

Refrigeration Program

Consideration was given last year to the position of gas refrigeration in Philadelphia, with current sales running about 10 per cent of total automatic refrigerator sales and with approximately 30,000 gas refrigerators installed. We had the highest priced refrigerator on the market and its sales were limited, because of the price, to the middle and upper classes, who alone could afford to buy under the 3-year terms then available. With the market about 65 per cent saturated with automatic refrigeration, the principal available sales outlet for refrigeration lay in the unsold market which included principally the lower income group. Replacement business had not yet built up to a point where it had become a large factor in this market, with replacements of automatic refrigerators in 1938 averaging about 10 to 12 per cent for all makes of refrigerators sold.

The problem was approached with the intention of placing gas refrigerators in first place in sales volume in Philadelphia, through the establishment of terms and a merchandising program that would definitely open the low income market to the gas refrigerator.

Since first cost was the major stumbling block when interpreted into conventional monthly terms, we had the alternative of either reducing the price of the refrigerator so as to make it competitive with the more popular electric makes and by so doing reach the lower income market, through correspondingly reduced monthly payments based on conventional term periods; or substantially lengthening the period of payment and maintaining our prices at better than current levels.

The first course was considered inadvisable because of the substantial loss in merchandise revenue that would result and it was felt that such a course would not provide sufficient additional sales that would fully compensate the company for such merchandising losses. Because of this opinion, we chose the latter plan, involving longer terms, and proceeded to add other elements to our program that would make these terms more attractive.

This plan involved the following parts:

1. Making the gas refrigerator easier to buy, through a lower down payment—only $2.00 down for any size refrigerator.
2. Making the monthly payments low and within the ability to pay of the lower income group through extending the terms to five years.
3. Establishing confidence in the product through a 5-year unconditional guarantee on the operating unit, burner and control.
4. Extension of the sale of the product to merchandise display dealers by establishing discounts comparable to other refrigerators with the maximum discount 35 per cent.

In order that no merchandise losses would be incurred, the cost of the added 5-year guarantee was included in the price and ample reserves set up against reverts and servicing over the five-year guarantee period. This program for reaching the low income customer with the gas refrigerator has been quite successful. The gas refrigerator will probably be in the first place in sales volume in Philadelphia this year, with over 10,000 gas refrigerators installed. It should account for at least 20 per cent of the total automatic refrigerator sales in Philadelphia, in spite of the fact that electric refrigerator distributors adopted the same terms.

Power of Dealers

In this connection it is interesting to note the power of a dealer sales organization, demonstrated by the fact that dealer sales have accounted for about 60 per cent of the total retail sales. This clearly shows the dependence of the low-income customer on the smaller merchandising outlets—credit furniture houses and neighborhood appliance stores—for the purchase of appliances.

We felt that the merchandising plan had sufficient customer appeal that we could not fully do justice to it with our own sales organization and our dealer set-up, which involved sales of appliances largely through a plumber-dealer cooperative organization. It was believed necessary to go out and obtain the merchandising type of appliance dealers who are responsible in this territory for the greater portion of automatic refrigeration sales.

In order to obtain this type of dealer it was necessary that we match the offers of distributors of competitive appliances both as to discounts and as to services to the dealers. The necessity of providing dealers with discounts up to 35 per cent in order to obtain their sales cooperation made it essential that the retail price of the gas refrigerator be maintained at the relatively high level, in order that no merchandise loss be suffered on dealer sales. The other elements of the plan have more than compensated for this relatively high first cost and all combined have made the sales of gas refrigeration, largely to the lower income group, a very satisfactory merchandising activity this year.

Our cancellations for credit were from 25 to 35 per cent of the orders taken and through such careful credit scrutiny we believe that we have largely eliminated poor credit risks. Our revert experience has been quite satisfactory to date and substantial merchandise profits have resulted from this program.

The program very definitely has reached the desired mark. The average earnings of refrigerator purchasers have been about $30 a week. Our program has resulted in a great increase in the acceptance of gas refrigeration, and from both a sales and merchandising profit standpoint, should justify its continuance.

Conclusion

The markets covering the non-user and low-use customers indicated by the survey originally made have been found profitable and worthy of further penetration. As a result of our experience it appears to us that in addition to the other broad fields of residential gas sales—including the high income and middle class customers; the new home market; and the bulk housing market—all of which are important and, in fact, essential to the continued well being of the gas utility; that these marginal markets, of non-users and small use customers, are equally deserving of attention and will equally repay the effort put forth to retain them.

Industrial gas salesmen in particular require a lot of staying power.

—C. F. HENNESS

Gas Sales Conferences

Dates have been announced for three of the series of regional domestic gas sales conferences sponsored by the Commercial Section of the American Gas Association to focus attention on the gas industry's sales problems.

The Southern-Southwestern Regional Sales Conference will be held on February 12, 13 and 14 in Hot Springs, Arkansas. L. M. Taylor, Mississippi Power & Light Co., Jackson, chairman of the council, will preside.

The Mid-West Regional Gas Sales Conference will take place on February 15, 16 and 17 at the Palmer House, Chicago, with E. R. Felber, chairman of this group, conducting the sessions.

The Eastern Natural Gas Sales Conference has been arranged for February 29 and March 1 at the Fort Pitt Hotel in Pittsburgh, Pa. Christy Payne, Jr., The Peoples Natural Gas Co., Pittsburgh, is chairman of this group.

All three conferences will include prominent speakers who will cover a variety of gas sales topics.

Meeting of the A. G. A. Refrigeration Committee at Chicago on December 5. Left to right, seated: G. H. Schlaster, H. D. Valentine, Louis Ruthenburg, Bernard T. Franck, Chairman, John W. West, Jr., J. L. Johnson, and H. R. Carlson. Standing: C. S. Stackpole, H. S. Boyle, W. Stanley Redpath, R. A. Gordon, H. R. Cloud, O. J. Haagen, H. C. Porter and C. A. Nash

A Novel Model Home Program

FOR the past 6 months the Southern California Gas Company has been featuring in a small (about 2 columns, 5") Sunday newspaper advertisement what is headlined as the "Model Home of the Week." Each home so featured is of course an all gas house, carefully chosen for its pleasing design and arrangement and the adequacy of its gas heating system, the accessibility of its location, etc.

Most of the houses are furnished by the builder for the showing and in all cases the company arranges through a dealer to have gas appliances, range, water heater, refrigerator and heating appliances all in place. In many cases a good deal of correlative advertising is obtained by the newspaper from building supply people.

Home Service Committee Active in 1939

LAST year's Home Service Committee under the chairmanship of Gladys B. Price, of the Southern California Gas Co., Los Angeles, closed its administration with a record of exceptional achievement in this important field. Its activities covered many phases of home service work, with particular emphasis on consumer education and sales promotion.

To meet the need of training home service for the increasing scope of its activities, two booklets were printed and made available to the industry,—"Home Calls" (20 cents) and Interim Bulletin 51, "Home Service Training Within the Company" (10 cents).

The home call book serves to point out to gas industry management certain changes which were discovered in home service contacts with customers. It also illustrates that attitudes and techniques of home call work have become more sales-slanted.

The cooking survey was a major activity of the Home Service Committee. Helen Smith of the Rochester Gas & Electric Corp. took over the assignment, which was requested by the Domestic Range Committee, of finding out how customers are using their cooking appliances, what they are cooking, how they cook, and whether they like to cook. The completed survey will be ready in February.

For the purpose of her talk at the A. G. A. convention entitled "Statistically Speaking," Miss Smith limited her discussion to the questions on the preferences indicated for the CP range. Copies of this paper and one by Miss Price entitled "In the Mirror of Customer Opinion" are available from the American Gas Association.

Miss Price's paper points out that home service departments, through their activities, provide the most effective mirror for the gas industry in respect to consumer education and customer contact work.

New Home Service Program Set Up

Mrs. Stephenson

MRS. ELIZA STEPHENSON of the Jersey Central Power & Light Company at Asbury Park, New Jersey, chairman of the Home Service Committee, has set up a comprehensive program of work.

At the first meeting of the committee, November 27, the plan of work outlined consisted of the following subjects: promotion ideas on the CP range; completion for printing of the filler paragraphs on water heating; a water heater talk for use on home calls and preparation of a booklet on "How To Use Your Gas Home Heating Equipment."

The 1940 home service program also includes the preparation of a consumer book on the subject of ranges and refrigeration; a report on material to present and how to conduct employee classes and the assembling of procedures used for cooperation with schools. This latter will include the preparation of talks and suggestions for illustrative material.

Utilities, Manufacturers and A. G. A. Join Hands in Selling a Giant Customer—The Hotel

Down the length of the A. G. A. Combined Exhibit at the National Hotel Exposition, showing the "sawteeth" provided for the various manufacturers and the circular niche framing Consolidated Edison's rotating photographic story of service

THERE are in the United States over 25,000 hotels reporting a total of 1,429,000 guest rooms *and doing an annual food business totaling $710,000,000.* That much cooking takes a lot of gas! In fact, the annual purchases of kitchen equipment by American hotels amounts to $8,900,000, and, although no one can tell exactly, a husky percentage of that tremendous figure goes for gas-operated ranges, fryers, ovens, broilers, urns, toasters and other appliances.

That's why the Industrial Gas Section of the American Gas Association, in cooperation with Consolidated Edison Company of New York, Inc., and five leading manufacturers of gas-fired equipment for hotel kitchens, took the entire North wall of Grand Central Palace, New York, at the Twenty-Fourth National Hotel Exposition, November 13-17—and put on a combined display of modern gas equipment which was seen by 60,000 visitors during the week.

But no display at a national exposition, however important the market, is worth its salt unless one has something interesting to exhibit, and displays it with a showmanship which dramatizes sales-courting features. Therefore, let's walk the length of the combined A. G. A. booth, chat with the representatives in charge, and see what the gas industry "sold" to the hotel world through its efforts in connection with the 24th National Hotel Exposition.

"Gas" Backwall Takes Whole Side of Hall

Although a separate section of the cooperative space was alloted to each of five manufacturers, all five displays lay at the base of a single integrated backwall—of sawtooth design and visible from almost any point in the hall. Canopies of light illuminated the equipment below and provided effective panels for repetition of the word "G A S" in brilliant cut-out letters over that band which carried the trade and company names of each of the five exhibiting firms.

At right angles to the length of the display and covering 30 feet of front end-wall was the American Gas Association panel, showing a happy hotel chef indicating statistics regarding the exemplary use of gas at the New York World's Fair for jobs similar or identical to those faced by most hotel proprietors. Echoing the theme of this panel was a distribution (from each component booth) of the A. G. A. Industrial Gas Section's effective piece of promotional literature, "Tomorrow's Industrial and Commercial Fuel—GAS—*At Work* in the 'World of Tomorrow.'"

Between the two manufacturer's sections at the front end of the North wall was located a giant column, a circular niche of which framed a continuous, rotating picture-story of gas at work in the kitchens of well-known hotels and institutions in New York City. This series of 16 photo-enlargements, punctuated with colorfully executed posters, described to hotel men the advanced fueling services of Consolidated Edison Company of New York. An unusual feature of the combined display design was the stepped-up height of the backwall, booth by booth from front to back, so that, from the entrance to the gas exhibit, the backwall behind the farthest exhibitor proclaimed "GAS" as predominately as the backwall behind the nearest exhibitor.

The booth design was the work of the Display Department of Consolidated Edison Company, under the direction of Ray Martin. L. G. Barrow of that department supervised the actual execution of the design. The entire joint exhibit was planned and made possible through a Committee of Manufacturers and the Committee on Displays at National Industrial Expositions of the Industrial Gas Section, of which J. V. Howes, New York, was vice-chairman. John J. Dunne, supervisor, industrial division, Consolidated Edison Co., played an important part in operating the display.

In addition to the sales staffs of the exhibiting appliance manufacturers, representatives of the Consolidated Edison Co. and of the Industrial Gas Section were on the floor at all times—to greet out-of-town gas people and to assist in making customers and prospects out of the 60,000 hotel and restaurant visitors.

Deck Ovens, Lighters, Ceramic Broilers, Fryers—All Significantly Improved

Among the Magic Chef cooking equipment displayed by American Stove Company in the foremost section of the exhibit were range ovens equipped for the first time with flash-tubes for lighting (and separate flame observation ports)—a fea-

ture bringing greater convenience, insurance against burnt fingers, and safety from ineffective ignition to chefs who have heretofore been required to light heavy-duty ovens with long tapers. Although a small improvement, its favorable effect upon the general attitude of chefs toward gas equipment promises to be considerable.

Again, the new uniform-heat range-top, introduced last year and designed principally for application in institutional kitchens where bulk menus (identical for all to be served) are prepared, attracted special interest. Other elements in the flexible American Stove line which were on parade included: deck ovens, ceramic broilers, salamanders, deep fat fryers, elevated ovens, open and closed top heavy-duty units, and sections of medium-sized restaurant ranges.

New Deck Oven

Standard Gas Equipment Corporation's heavy-duty Vulcan line featured a new deck oven, less than three months old, and different from the familiar and heavier refractory-hearth unit (also displayed) chiefly by virtue of its steel plate decks and sheet metal lining—and its consequent lower price. Each deck was individually fired by two side burners in addition to an extra center "booster" burner of half the rating of either of the other two, installed to provide the baker with greater bottom heat as, if, and when desired. The oven was insulated with two inches of rock wool. The manufacturer predicts that this new oven will appeal to a wider field of buyers than deck ovens previously available, and notes that, in general, sectional ovens are meeting with increasing favor by hoteliers.

Two significant changes in the Vulcan heavy-duty range line were: (1) the supplying of a divided basket for deep fat frying elements (so that different foods can be fried at once in a single unit during periods of low demand), and (2) an increase in the depth and weight of the ceramic broiler grid so as to accommodate higher food loads and carry sufficient heat in the oval grid bars to mark steaks. It is also worthy of note that the six burners of the enlarged ceramic broiler are now individually adjustable rather than being commonly manifolded with but two inspirators and controls.

The new Garland ceramic broiler is fired from side burners, easy to remove, and out of the high-heat zone. A polished steel plate tilted on the grid made it easy for hotel people to see the new construction

In the Garland section, Detroit Michigan Stove Company emphasized a new ceramic broiler (in two sizes) fired for the first time by ports *only* at either side of the broiler—so that burners are kept out of the high heat zone to preclude warpage and may be removed without disturbing the radiant or ceramic elements. Above the ceramic elements is a full two inches of firebrick to form a heat reservoir and permit the attainment of higher grid temperatures.

Although ceramic broilers achieving such a high intensity of radiant heating have been built before, their servicing, it is claimed, was too difficult because of the selfsame burner warpage and difficulty of disassembly that the new Garland broiler is designed to overcome. A new series (No. 80) of intermediate small-restaurant or large-tearoom ranges was also introduced by Garland in the form of two-oven sections, 34 inches deep, and available with three different top constructions.

Insulation Improved

Blodgett bake ovens on display in the combined gas area boasted new insulation, consisting of four inches of Fiberglas enveloping the complete oven. This refinement involves no price change, although it is purported to result in more effective insulation, cooler kitchens, and faster heating-up times. It was pointed out that Fiberglas has less heat-absorbing capacity than ordinary rock wool. An automatic two-deck, three-door oven, particularly suitable for producing Italian Pizza was presented to incite discussions of specialty baking.

Finally, the fifth section of the combined exhibit sported the latest in Pitco Gas Frialators. An extension of this line from nine to twelve sizes now makes it possible to specify individual deep fat fryers of from 15 to 500 pounds fat capacity. A new thermostatic control system has been incorporated so that fat temperatures may be held much more closely to the point of adjustment than has been available to date. Diaphragmless snap-acting thermostats and other refinements are credited for the improvement. Burner inputs per pound of fat, and per unit of frying area, have been increased in the heavy-duty line to permit greater cooking speed. A new small doughnut fryer (40 dozen per hour capacity) was shown "in answer to a crying need for equipment with which to tap the small bakery market."

An American Stove Company representative points out the features of the Magic Chef ceramic broiler to a visiting utility man

18 Other Booths Show Modernized Gas Equipment

Over and above the five gas equipment makers exhibiting within the combined gas display area, there were no less than 18 other exhibitors at the National Hotel Exposition who had gas-burning units to show.

Across from the A. G. A. booth, Robertshaw Thermostat Company had in operation representative snap-acting and graduating controls of its manufacture, and Modernized Products, Inc., displayed (as well as used) its Stovex coffeemaker units in conjunction with the La Touraine Coffee Company exhibit.

Savory Appliance's familiar line of revolving counter toasters and vertical broilers was extended by a gas hamburger-bun unit which toasted the cut side, but merely warmed the crusted back to preserve a maximum of moisture within the bread. Amcoin Corporation showed quality all-glass-lined gas-fired coffee urns in stylish new dress, and capacities from 1 to 8 gallons. For the first time, all urns in this line were thermostatically controlled.

Nathan Straus, Duparquet, Inc., included an Amcoin urn in its booth, along with the Hotzone No. 2 gas broiler-griddle introduced at the A. G. A. Hotel, Restaurant and Commercial Gas Conference in Brooklyn last May, and a Burkay instantaneous gas water heater of remarkable performance in the higher temperature zones.

Silex offered coffeemaker sets in such an amazing variety that anyone could find "his unit"; Automatic Egg Timer Company demonstrated both 2- and 4-bucket gas-fired egg boilers; Broilerizer Company again cooked steaks in its broiler using gas above the grid and charcoal below; and both Star Metal Manufacturing and Thermolator Company showed thermostatically controlled gas coffee urns.

Newsworthy, also, was the Grid-L-ator which Majestic Manufacturing Company introduced to achieve new standards of cleanliness and style in gas-fired counter griddles. The 6-roll 80-inch flat work ironer

capable of drying and ironing in a single pass, which was exhibited in behalf of the Chicago Dryer Company by the American Laundry Machine Company, was also a gas appliance worthy of note in view of its 6000 B.t.u.-per-hour gas-heated main roll.

Champion Dishwashing Machine, Faspray Corp., Colt Autosan, and G. S. Blakeslee and Company, all showed numerous models of dishwashing apparatus which, in the smaller sizes, utilize gas to maintain washing water temperatures. It is interesting to note that Colt Autosan's smallest unit (R-16), previously heated by electricity or steam, now uses a slow-recovery gas-fired unit because "the trade urgently demanded it." The Cunningham Company featured apparatus for washing, polishing, sterilizing and drying drinking glasses at paces up to 2000 per hour—such units all requiring auxiliary instantaneous water heaters or boilers (usually gas-fired) capable of delivering 180° F. water.

Also of interest to gas men was the pressing machinery and complicated dry cleaning equipment displayed by the Prosperity Company, which, according to their executives, "foreshadows great expansion of small laundry enterprise and a consequent ripening market for gas-fired high pressure steam boilers of from 6 to 10 hp."

Yes, wherever the expositioning hotel man turned he found better-than-ever gas equipment "at his service."

Cooperative Gas Industry Policy Explained to Exhibitors

Yet all the good prospects at any National Hotel Exposition are not the 60,000

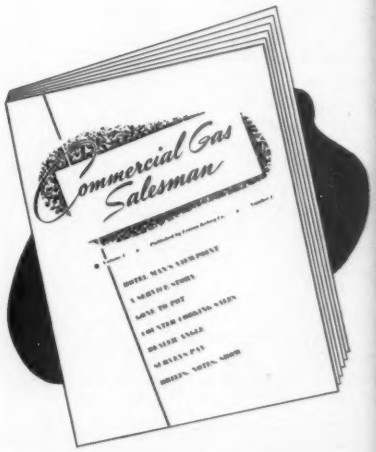
(Continued on page 39)

INDUSTRIAL & COMMERCIAL NATIONAL ADVERTISING FOR JANUARY

The Advertising Committee of the Industrial Gas Section, J. P. Leinroth, chairman, and F. B. Jones, vice-chairman, announces that full-page advertisements will appear in the following trade and business magazines during the month of January.

MAGAZINE	DATE	TOPIC
Metals Industry		
The Iron Age	January 4 (Annual Review Number)	Controlled atmosphere Gas furnace for bright annealing copper in plant of Revere Copper and Brass, Incorporated, Rome, New York.
Steel	December 18	
Metals and Alloys	January	
Metal Progress	January	
Industrial Heating	January	
Heat Treating & Forging	January	
Food Industry		
Bakers Helper	December 23	New Gas-fired oven bakes better product, saves fuel in Ebbeson's Bakery, Chicago.
Bakers Weekly	December 23	
Food Industries	January	Gas used for roasting coffee in Chicago plant of Continental Coffee Company, Incorporated.
Ceramic Industry		
Ceramic Industry	January	Gas cuts firing cycle, makes better product in plant of McDanel Refractory Porcelain Company, Beaver Falls, Pa.
Hotels and Restaurants		
Hotel Management	January	Modern Gas equipment saves time, wasted goods and fuel in Drumlin's noted playspot, Syracuse, New York.
American Restaurant	January	
Chain Store Age (Fountain & Restaurant Section)	January	Modern Gas equipment helps serve over 2,000 low-cost meals per day, at profit in Murphy's big 5 & 10, Pittsburgh, Pa.
Hospitals and Schools		
Modern Hospital	January	1,500 meals cooked daily, in modern Gas-equipped kitchen of Samuel Merritt Hospital, Oakland, California.
American School Board Journal	January	Convenient, clean, economical—Gas-fired cooking equipment serves 1,000 students daily in Andrew W. Mellon Junior High School, Mt. Lebanon, Pa.
Processing Industry		
Chemical & Metallurgical Engineering	January	Gas saves storage and time—in baking of enamel for National Colortype Corporation, Bellevue, Kentucky.
General Manufacturing		
Industrial Power	January	Gas-fired radiant tube furnace cuts annealing cost—Wilson Steel and Wire Co., Chicago, Illinois.

Commercial Gas Aid Makes Its Bow



ONE step ahead of Santa Claus, the Fenton Kelsey Company, 43 East Ohio Street, Chicago, last month presented the gas industry with the *first* issue of the *first* magazine ever to be directed exclusively to the man who sells gas to commercial establishments—*Commercial Gas Salesman,* Volume I, No. 1—and it's a real Christmas present for the gas industry. If forthcoming issues (six of them per year) offer as much help and inspiration as this 16-page issue, the new gas magazine should not suffer from lack to subscribers.

Among the features in the first issue can be found titles like "A Hotel Man Looks at Gas Service," "Selling the Small Cooking Customer," "Retarded Dough to Increase Oven Sales 500%," "Why the Kitchen Equipment Dealer?", "A Service Plan That Pays," and "Foote Notes"—all by authors who know what they are talking about.

If gas sales on "Main Street" have anything to do with your pay check, you'll want to see the first copy of *Commercial Gas Salesman.* The subscription rate is $1.25 per year.

Band and Feature Activities Enliven Gas Exhibit

WHEN the Washington Gas Light Company officials set out to make the most of the annual three-day Regional Restaurant Convention jointly sponsored by the National and Washington Restaurant Associations in Washington, D. C., they did a real job. First, the company's 40-piece band greeted National Restaurant President McVittie and other incoming delegates when they stepped from the train at Silver Spring, Maryland, the day before the convention opened on December 4. Then they placed two gas-industry speakers on the convention program for Wednesday afternoon, the first being Al Pitman of J. C. Pitman & Sons, Inc., Lynn, Mass., who led a discussion on the care and maintenance of heavy-duty cooking appliances and what the restaurateur should know about deep fat frying. The second speaker, Frank H. Trembly, Jr., The Philadelphia Gas Works Company, represented the Industrial Gas Section of the American Gas Association and spoke on "Producing Quality Food at a Profit."

64-Foot Gas Industry Booth

In the Exposition associated with the convention, the Washington Gas Light Company, in cooperation with various appliance manufacturers, sponsored and manned a 64-foot gas industry booth covering the whole entrance wall of the display hall in the Mayflower Hotel. Under suitable unifying decorations pronouncing the virtues of gas as a restaurant fuel, were grouped: a double-heat-controlled four-deck Blodgett bake oven, several models of latest type Pitco deep fat fryers, lines of medium and heavy-duty range sections by American Stove Company, Detroit Michigan Stove Company, and Standard Gas Equipment Corporation, Humphrey heat towers, unit heaters and forced air space heaters, and the new Burkay continuous-flow water heater. The Detroit Michigan Stove Company line exhibited was their World's Fair model, executed throughout in monel metal. One visitor commented, "The gas exhibit was quite the most impressive feature of the show."

It is also of interest that J. C. Pitman & Sons, Inc. and the Washington Gas Light Company cooperated to offer a handsome cedar chest and a counter model Pitco Frialator valued at $100.00 as a prize to the lucky restaurateur who drew the number which proved to be the combination of the chest. Mrs. Theodore Sloat, wife of a past president of the Washington Restaurant Association, and operator of the well-known Garden Tea Shops in Washington, was the fortunate winner.

Not content with even this degree of participation in the convention and exposition, arrangements were made for equipping the Model Restaurant Kitchen, which featured this 1939 show, with the following gas appliances: ranges (American Stove), broilers (Detroit Michigan Stove), dry steam tables (Thermaduke), refrigerator (Servel), steamer (Cleveland Range), deck oven (Standard Gas Equipment), glass washer (Lofstrand), coffee makers (Silex), toaster (Savory), and thermostatic counter griddle (Majestic).

That's the way to make customer-group conventions pay out in gas sales—by playing all ends against the middle—with bands, with speakers, with displays, with contests, and with cooperation in all special feature activities.

Partial view of the battery of gas equipment which told an impressive story to Washington restaurateurs and visitors

GOING AHEAD *with Industrial Gas*

Our column is well named! A. G. A. statistics as of December 30, 1939 (offering 1938-versus-1939 figures) show industrial gas "going ahead" both in volume and revenue. In 1939, national industrial and commercial gas load increased 11.1% to 1,071,297,000 M cu.ft., while corresponding revenues rose 8.9% to $266,856,000. More than half of the total increase in gas industry income for the year came from sales for business purposes. Manufactured gas sales to industry practically "broke the barometer" with a 17.4% hike.

Christmas card jingles still have us "that way":

To tell "what gas can do for those
In business," an addition shows

Our nineteen-forty advertising
Will astound, with facts surprising,

One-fourth million monthly scanners
Of sixteen trade-mags read by planners

Of plant equipment in seven classes
Of markets where industrial gas is

Headed for a usage swelling—
If we "follow through" with selling.

Good sales literature is all too rare. That's why we want to make special notice of The Selas Company's compelling new booklet "Improved Processing." It describes gas at work doing eye-opening modern jobs for all manner of industry. Its design, its illustration, and its phrasing make one want to read it (and believe it, too, for its emphasis isn't noisy)—and, therefore, we believe it *sells* industrial gas. We advise you to get it, to read it, and *to use it* on your customers.

"A great revolution has taken place in cake-making, and baker's cake has gradually earned and received (mainly through improved ingredients, *manufacture* and merchandising) widespread acceptance in the home." INDUSTRIAL BULLETIN of Arthur D. Little, Inc.

Yes, and at the same time, gas has earned and received widespread acceptance in the bakery. The italics are ours.

The effectiveness of editorial publicity is multiplied by firing time-and-time-again at the same target. No less than 37 of the clippings in your 1939 Industrial Gas Publicity Scrapbook (that's an average of one every 10 days) pounded at the same theme—gas for summer air conditioning. Another 9 slippings made important mention of the subject along with other matters.

Technical Section Organizes for Active Year

Photos and Story by A. Gordon King

American Gas Association

THE first week in December saw the newly organized committees of the Technical Section getting into their stride for 1940. Well-attended meetings marked by lively discussions of the industry's operating problems were the order of the day.

The Gas Production Committee, W. K. Beard, Chairman, has planned comprehensive coverage of subjects that are not only timely but should prove of interest to all.

Consideration was given to the many suggestions for program papers for the Joint Production and Chemical Committee Conference and the Distribution Conference as well as the Annual Convention next fall. Included among the suggestions was the first instance where a private gas corporation had been financed by means of a Government loan of more than half a million dollars for the addition of new mains and storage holders to serve more than a thousand new customers.

Samuel Green, Chairman of the Water Gas Subcommittee, reported that consideration was being given to papers on the refractory screen process; sealing mediums for waterless holders; heating outlying holders; the effect of refining methods in the oil industry on the availability of oils for gas enriching purposes; standby plant problems such as maintenance, etc. together with numerous operating details relating to water gas production.

The Carbonization and Coke Subcommittee, E. W. Zimmerman, Chairman, received numerous suggestions among which were coke reactivity; adding oil to coal; liquid purification developments; oxide studies; coke sizing; screening and foundry coke requirements.

The Gas Conditioning Committee, L. J. Willien, Chairman, held a well-attended meeting and considered numerous technical details with respect to gas production control.

The Distribution Committee, C. H. Waring, Chairman, laid the framework of a comprehensive program with particular emphasis on subjects to be presented at the annual conference. The following committees were appointed to study certain phases of distribution work for the coming year:

A. W. Fuller is continuing as Chairman of the Meters and Metering Subcommittee. This subcommittee will investigate a number of timely subjects and report at intervals to the industry. The Pipe Coatings and Corrosion Subcommittee will continue to function under the chairmanship of A. V. Smith. This group's work, coupled with the investigation being conducted by Dr. Scott Ewing, promises two interesting papers for presentation at the Spring meeting.

Above—The Distribution Committee gets off to a fast start. Left to right, around table: W. H. Weber, W. L. Shively, A. W. Fuller, H. L. Gaidry, A. V. Smith, C. H. Waring, chairman, L. W. Tuttle, Fred Goodwin, C. F. Turner, E. G. Campbell, L. K. Richey, O. H. Folger, and H. L. Peden

Below—The Managing Committee of the Technical Section lines up for the camera before tackling the 1940 program to increase gas operating efficiency. Left to right, first row: H. W. Hartman, T. J. Noonan, W. K. Beard, and A. C. Cherry. Second row: K. B. Nagler, S. Cohn, S. J. Modzikowski, Fred M. Goodwin, John H. Wolfe, and C. H. Waring. Third row: W. J. Murdock, O. H. Smith, L. E. Knowlton, R. G. Griswold, L. J. Willien, and C. F. Turner. Back row: John J. Crilly, George T. Bentley, C. S. Goldsmith, F. C. Weber, Fred Denig, F. F. Ingwall, and E. L. Sweeney

The Pipe Joints and Pipe Material Subcommittee and the Gas Main Structural Strength Subcommittee have been consolidated into one group which will be headed by E. G. Campbell. This subcommittee, working through the A. G. A. Testing Laboratories, is now investigating boltless couplings and several other subjects, and will be prepared to present their findings in the Spring.

L. V. Tuttle, Vice-Chairman of the Distribution Committee, is arranging informative and timely discussions for the Luncheon Conferences.

Above left—The Chemical Committee poised for action. Left to right, seated: R. H. Sheridan, Louis Shnidman, E. L. Sweeney, S. J. Modzikowski, chairman, S. Cohn, Prof. C. C. Furnas, R. W. Fraser, and Dr. Machwart. Standing: T. L. Robey, W. H. Fulweiler, E. M. Bliss, Gladys Hanshaw, H. J. Meredith, L. M. Van der Pyle, C. W. Wilson, S. S. Tomkins, S. Green, and W. L. Shively

Above right—The Gas Production Committee starts its deliberations. Left to right, seated: G. G. Howie, G. T. Bentley, B. R. Challenger, F. B. Parke, W. K. Beard, chairman, H. W. Hartman, R. E. Kruger, L. E. Knowlton, and R. M. Kellogg. Standing: C. R. Locke, Gladys Hanshaw, A. C. Sedlachek, K. B. Nagler, E. W. Zimmerman, L. J. Willien, R. H. Arndt, and S. Green

Right—The Gas Conditioning Committee meets to plan a comprehensive program. Left to right, around the table: H. D. Lehman, T. L. Robey, E. J. Murphy, A. R. Belyea, John H. Wolfe, Gladys Hanshaw, L. J. Willien, chairman, T. J. Noonan, Prof. Wilbert J. Huff, C. F. Turner, D. B. Williams

Hugh L. Peden, reporting for C. C. Simpson, stated that the Cast Iron Pipe Standards Subcommittee will complete its investigation of standards for gas pipes, and will be ready to report at the Spring Conference.

Chairman S. J. Modzikowski reported to the Chemical Committee that the committee had been strengthened by the addition of nine representatives of manufacturer companies and universities. Among its activities the following were discussed:

Fuel-Flue Gas Book

Louis Shnidman, Chairman of the continuing Fuel-Flue Gases Subcommittee, reported that the book "Fuel-Flue Gases" is being printed and should shortly be available for sale.

S. S. Tomkins, Chairman of the continuing Subcommittee on Gas Chemists' Handbook, requested Mr. Fulweiler, editor of the revised chapter on Gas Analyses, to report progress. Mr. Fulweiler advised that he is in process of selecting essential pertinent material on gas analyses from a large amount of material and that the manuscript will be ready in the near future.

A full discussion was had with respect to the preparation and distribution of material to the members for their immediate use. It was decided that material should be mimeographed and later revisions could be made immediately prior to final printing. Various publication methods were suggested and the matter was assigned to the Chairman of the Subcommittee, Mr. Tomkins, for handling.

A very comprehensive list of proposed subcommittee activities was presented and thoroughly discussed, many of them under the general heading of new developments; the Chairman of this subcommittee is E. L. Sweeney, Vice-Chairman of the Chemical Committee.

Out of the 18 proposed activities, all of which are interesting, considerable interest centers on a suggestion made by Louis Shnidman on the development of a catalyst to spontaneously ignite mixtures of fuel gases and air so eliminating pilot lights.

The Subcommittee on Analyses and Tests will be headed by R. J. Sheridan and many interesting suggestions have been received, some tentative papers being in the offing for the Joint Conference, its luncheon conferences and the annual convention. The suggestions are too numerous to list here but their wide scope will be noted in three headings: Changes in Composition of Gases in Contact with Soil; Chemistry of Pilot Outages, and Microanalysis as Applied to the Gas Industry.

The Managing Committee, F. M. Goodwin, Chairman of the Advisory Committee, received the reports of the chairmen of the committees above mentioned and advised that D. P. Hartson as Vice-Chairman of the Section would serve as Chairman of the Program Committee for the Annual Convention and that the committee consisted of committee chairmen, W. K. Beard, S. J. Modzikowski, C. H. Waring and L. J. Willien.

The Chairman of the Distribution Committee, Mr. Waring, announced that it had been agreed that the Distribution Conference will be held in Houston, Texas, at the same time as the Natural Gas Convention—May 6 to 10, 1940. This suggestion was approved by the Managing Committee.

The Joint Production and Chemical Conference having been discussed and voted upon by the Chemical Committee and similar action and agreement having been taken by the Gas Production Committee, it was agreed after motion made and seconded, that a three-day Production and Chemical Conference should be held in New York during the third week of May, 1940, and further that the luncheon conferences should again be held during the Joint Conference.

Booklet on Wrinkle Bending Pipe

A BOOKLET describing the recently perfected wrinkle-bending method for bending pipe has been announced by The Linde Air Products Company, Unit of Union Carbide and Carbon Corporation. This process is finding wide application, particularly in the installation of cross-country pipe lines, or wherever else pipe must be "tailored" to fit.

The process depends upon the use of the oxy-acetylene flame for heating a narrow band about halfway around the pipe at the point at which a change in direction is desired. When this band has reached a red heat the pipe is bent mechanically, with the heated portion at the inside of the bend. This causes a slight upsetting of the heated metal and produces a change of direction of from 4 to 6 degrees.

The wrinkle-bending process is fully described in the booklet, together with suggestions for the mechanical bending of the pipe. Copies of this four-page, illustrated booklet, 8½ x 11 inches in size, and entitled "Wrinkle Bending" are available from the nearest office of The Linde Air Products Company.

Laboratories

N. T. Sellman, *Chairman, Managing Committee*
R. M. Conner, *Director*
W. H. Vogan, *Supervisor, Pacific Coast Branch*

Revised Gas Appliance Standards Benefit Consumers

AMERICAN Standards for gas appliances and accessories have widely benefited the public since establishment by the American Gas Association of its standardization and approval program. Among these benefits are (1) availability to the customer of tested and approved gas appliances, (2) steady improvement of performance on all new models offered to the public, and (3) development of increased durability of construction.

Reflecting the public acceptance of this program, at the present time over 95 per cent of all domestic gas appliances sold in the United States and Canada bear the American Gas Association Testing Laboratories' Seal of Approval. This is the consumer's symbol of dependable gas equipment which complies with the basic requirements of the American Standards Association.

More Substantial Construction

In the last ten years many improvements have been added in the design of domestic gas appliances to increase their eye-appeal to the consumer and adapt them to the decorative scheme of modern homes. At the same time in order to comply with American Standards for such equipment, they have been constructed more substantially and with higher operating efficiencies.

The time required to boil water on the top burners of a gas range, for example, or to heat its oven to a desired baking temperature have been reduced one-third with a corresponding decrease in the amount of gas required to accomplish this work. Another outstanding illustration benefiting the consumer is a substantial increase in the thermal efficiencies of various types of water heaters.

Reducing the consumer's gas bills and at the same time increasing his convenience in the use of these appliances has resulted in establishing greater consumer confidence in the satisfactory performance of tested and approved appliances.

Continuing this standardization program in the best interests of the public, American Standards are being continually revised and extended to cover new improvements and developments in gas-consuming equipment. At the last meeting of the American Gas Association Approval Requirements Committee, held October 6, 1939 at the Cleveland Testing Laboratories, recommended revisions to standards for such widely used gas-burning equipment as central heating appliances, clothes dryers, conversion burners, hot plates and laundry stoves, domestic ranges, space heaters and unit heaters were considered and approved. These revisions will further strengthen the current standards and thus provide additional advantages to the consumer. Some of the more important revisions to these standards are presented below.

Ensuring satisfactory operation in the home of the consumer, domestic gas appliances are tested under the severest conditions in the Testing Laboratories. In view of numerous refinements in gas production and distribution and the increasing use of bottled gas and related fuels, the Approval Requirements Committee has from time to time deemed it necessary to revise and add to test gases employed so that the tests applied simulate as accurately as possible conditions in the field. At the recent meeting of this committee, standards were extended to cover the testing of appliances with liquefied petroleum gases and butane-air.

Bottled Gas Progress

In view of the rapid progress of the liquefied petroleum gas industry to make bottled gas available in rural sections, a large group of gas users have been furnished with the same conveniences and reliability of gas service as are available in the city. Use of these bottled gases was pioneered primarily for cooking and refrigeration. Satisfactory consumer experience with Laboratories' approved domestic gas ranges and gas water heaters has resulted in an increasing demand for their approval on other types of gas appliances. Consequently, provisions for testing and approving all major gas appliances for use with liquefied petroleum gases have been added. Consumers in small communities in which butane-air gas is distributed have been benefited in the same manner, as provisions for testing all major gas appliances with such gases have also been added to all the standards under consideration at this time.

Many mechanical and electrical controls have been developed and applied to gas-burning appliances to increase their convenience to the consumer and their ease of operation. Among these improvements are automatic controls such as automatic ignition and temperature control devices. The use of these accessories has proved to be so satisfactory to purchasers of appliances equipped with them that a demand arose for similar controls to be furnished on all commonly encountered types. These have been met with the expansion of the standards to cover such accessories and thus assure continued satisfaction and service for the public.

In order to provide adequate assurance that automatic electrical ignition systems will function properly at all times, test procedures have been incorporated in present standards to simulate their operation in service for the lifetime of the appliance. At the same time provisions have been added to insure safe and positive action, failure of which will automatically turn off the gas supply. Many constructional provisions have also been included, based on the latest edition of the National Electrical Code accepted by the American Standards Association.

In order to assist the consumer in purchasing tested and approved gas-burning equipment which will meet his needs and the proper adjustment thereof in his home, name plates are provided with all necessary information. From time to time, these markings are revised by the Approval Requirements Committee in line with latest developments.

Consumer Protected

Protecting the consumer from buying a domestic gas range which is only partially rather than completely insulated, it was recently ruled that insulated ranges should be marked "Insulated" on the name plate or on a separate marking permanently attached near the name plate. Although both insulated and uninsulated ranges comply with the basic requirements of American Standards, an insulated range will liberate less heat into the kitchen during the use of the oven. At the same time the amount of gas required to maintain a given temperature condition for roasting or baking is much less than the gas consumption in an uninsulated range. Furthermore, the standards have been revised permitting insulated ranges to be installed closer to the walls than uninsulated ranges. Thus, this marking will serve as a guide for the proper installation of domestic gas ranges.

Safeguarding the consumer against misuse of approved gas heating equipment, requirements have been added to the standards for central heating gas appliances and unit heaters to specify statements on their name plates indicating exactly how these appliances were approved by the Laboratories. For example, furnaces will be required to be marked prominently to indicate whether they were approved with or without a blower.

There is no doubt that the consumer will appreciate this distinction, as by com-

paring the markings on the name plate of a blower type furnace with those on a gravity type he will be aware of its significance. In the same manner, a unit heater has the term "unit heater" incorporated on its name plate indicating how this appliance was approved in the Laboratories. From these markings, the consumer can ascertain clearly what he is buying and can determine whether installation is made accordingly. Furthermore, in the interest of added safety, when unit heaters are installed and operated in hazardous atmospheres in garages and airplane hangars, proper installation instructions will be required on the name plate. These instructions will include among other information instructions to install the heater at least eight feet above the floor.

The foregoing highlights of the Approval Requirements Committee actions indicate how the consumer will benefit from changes made in existing standards. They are typical of their constant strengthening in the interest of the general public. Consisting of eight gas appliance manufacturers, seven gas company representatives and ten consumer and general interest members, this group is particularly well qualified to consider these recommended revisions in the best interests of all concerned.

By their close contact with consumers' demands for improvements on new models of domestic gas appliances, these manufacturers are able to determine whether such specifications can be complied with in the manufacture of this equipment, as well as whether the finished product can be marketed.

The gas utilities also have close contact with the consumer. In the role of servicing gas appliances in the consumer's home, utilities are aware of the problems existing in the utilization of their product and the operation of appliances thereon. Based upon their field experience they are able to recommend such changes as will improve the construction and performance of gas-burning equipment when manufactured to comply with the standards. The consumer and general interest members which are comprised of representatives of such national organizations as the National Bureau of Standards, U. S. Bureau of Mines, U. S. Public Health Service, U. S. Bureau of Home Economics, American Home Economics Association, National Safety Council, and other nationally known groups are primarily concerned with the economical and satisfactory performance of gas-burning equipment. In considering the strengthening and revising of standards such as have been enumerated previously, these various interests balance each other, with the result that the new standards approved by this group cover the field from all points of view.

The nine sets of standards mentioned are being presented to the American Standards Association for acceptance as American Standard and on completion of this procedure will become effective as of January 1, 1941. By this action the consumer will thus be provided with tested and approved models of all types of gas-burning appliances. At the same time, he is assured of substantial construction, greater efficiency and economy, and increased convenience in the use of his equipment. Bearing out the experience of enacting new and revised standards in the past, it is expected that this action will stimulate the development of more improvements which, in turn, will further benefit the consumer.

"Hot Stuff"

OUTPOURINGS of natural gas, which had become ignited, were known as "burning springs" in the early days of this country, and were noted as such by George Washington. Oil was called "Devil's Tar" when, about 1818, it flowed from a salt well drilled near the Cumberland River, covered the surface of that stream, and caught fire to the destruction of trees, buildings, and salt works. "Rock oil" and "coal oil" are old terms rapidly passing into limbo, along with "Seneca oil" and "American medicinal oil."

Possibly one of the most descriptive terms was "hell in harness," used in the 60s to describe oil trains then used to move crude from field to refinery.

Pacific Coast Laboratories Move to New Building

ON November 25, 1939, testing operations were begun at the American Gas Association's new Pacific Coast Branch Testing Laboratories building at 1425 Grande Vista Avenue, Los Angeles. Announcements to this effect were distributed to all gas equipment manufacturers and other interested parties early in November.

The changeover from the old to new quarters was accomplished in three days. Full advantage was taken of the Thanksgiving holiday and all testing equipment and office furniture as well as appliances undergoing test were moved with minimum interruption in regular testing activities.

During the last few years, the former rented Laboratories building had become inadequate to handle the considerable increase in the number of appliances submitted for test and approval. The new building will provide over three times as much room for testing as the old building and will also assure ample facilities to handle the anticipated expansion of local industries for some time. Adjacent to the building is a 10,000 square yard lot which will provide parking space for visiting manufacturers as well as for any future expansion of the new building.

GAS ON THE MARCH

(Continued from page 4)

sold. Total gas range sales during 1939 were approximately 30 per cent higher than the previous year and more than 80 per cent of these ranges were equipped with oven heat controls. The Association of Gas Appliance and Equipment Manufacturers reports substantial increase in the sale of every major type of gas appliances and equipment during 1939.

This brief summary supports our firm conviction that the gas industry is on the march and that 1940 will see even greater progress than in the past. Let's make the most of it.

WHAT OF THE FUTURE?

(Continued from page 6)

United States less anxious about its access to the Bolivian tin supply. . . . To the extent that science can produce these materials or suitable substitutes, to that extent will be removed almost the only basis for war which can be intelligently argued for at the present time."

And let it be noted here that synthetic rubber and lacquers can be made from natural gas.

A comparison of our industry with the coal industry might well be considered in this connection. Both industries supply commodities having great utility as basic fuels and also great utility as chemical raw materials. The coal industry failed to develop the raw material phase of coal and left the profitable field of coal tar products to the chemical industry. Let us take thought now as to whether or not we desire to reserve for the gas industry the potential profits that will be made from a chemical industry using natural gas as a raw material. We have a strategic advantage now in our familiarity with natural gas, its production and distribution. With intelligent research, we can go forward and expect to add to our own well-being as an industry and also to benefit humanity as a whole.

Perhaps Faraday, as quoted by Dr. J. B. Conant, president of Harvard University, should have the final word. At the close of a lecture on the principles of electromagnetism in which he showed a wire carrying an electric current rotating around a magnet, an elderly lady came forward.

"What is the use of that toy?" she inquired.

Faraday replied: "Madam, what is the use of a baby?"

Let us all help to nurture this research baby, to bring him to a full and capable manhood, so that we may be comfortable in our old age.

THOUGHTS ON GAS RANGES

(Continued from page 22)

How am I so sure there's a tremendous gas range replacement business just waiting to be sold? Well, research people are continually making surveys. On *McCall's Magazine* our folks are always out making calls on our readers. Some time ago we went into the homes of representative readers and asked them, "If you could make three changes in your kitchen, what would they be?" Two out of every three women said they wanted new equipment. And of the women who wanted equipment, over a third wanted a new range.

A small percentage—perhaps 10%—of all gas ranges sold go to new users of gas ranges. What are some of the factors that are likely to affect this market? First of all, the number of domestic gas customers is on the increase. In September, 1938, there were 16,010,000 domestic gas customers. In September, 1939, just a year later, there were 16,340,000.

Another encouraging factor to the gas range business is the increase in new home building and the favorable terms on which new homes can be bought. Back in 1934, only 59,000 new homes were built in urban and suburban localities. Since then the number of non-farm homes built each year has increased. Last year 350,000 new homes were erected. This year about 400,000 new homes will be built, an increase equal to all the new homes built in 1934. I've recently talked to some government experts on home building. Most encouraging is the prospect for future new home construction, since government and private organization plans include not only new homes for slum clearance but homes for the white-collar class and the middle-income families. You all read in the papers these days the extremely favorable terms under which families can buy new homes. Whenever a new home is built, there's a chance to sell another new gas range.

But figures on new home construction alone do not tell the whole story, even to a research man. I have a strong conviction that home life in America is coming into its own again. Perhaps it's because I'm getting older, but riding around in autos just for the hell of it, going to the movies, night life and activities outside the home haven't the same glamour they used to have. I note an increase in home activities and hobbies—stamp collecting and all the other home hobbies are at their highest peak for all time. Certainly every study we make among the four million families that read *McCall's Magazine* and *Redbook Magazine* show a keener interest in home life and in the home. Perhaps the repeal of prohibition had a great deal to do with this renaissance of home life in America. But whatever the cause, the home appliance industry should be grateful because it spells greater opportunities for home appliance sales.

Markets Are People

In this talk I've given you a lot of statistics, figures and numbers. And it's natural for market research people, as well as factory salesmen to think in terms of numbers and quotas. But let's not be misled. Markets are not numbers. Instead markets are people. When a million gas ranges are sold, they are not sold to a million statistics. Instead those million gas ranges are sold to people—a million women who want the best they can get for Poppa and the kids.

To sum up, what are women think-

Streamlined Advertising

Simplicity is the keynote of the "streamliner" bulletin boards which the Citizens Gas and Coke Utility, Indianapolis, is using for promotional purposes. There are seven of these boards in Indianapolis, located strategically, with copy changes effected every four months. At present, five carry a cooking story, one a refrigerator story, and one the "4 Big Jobs" copy. The color scheme is: yellow background, dark brown copy and black signatures. G. A. Saas is advertising manager of the company

ing about gas ranges and what does it mean in terms of the basic market for gas ranges?

Gas ranges have carved a real niche for themselves with the American homemaker. She is buying more gas ranges this year than she did last year.

The gas range faces no immediate threat from the electric range, if gas range people, backed by advertising, will make an honest effort to persuade Mrs. America that a new gas range is more desirable than all the other equipment on which she can spend her money.

New home building, an increase of home life in America and general business activity all point to a more favorable opportunity to sell more gas ranges in 1940. There will be new users to be sold and there will be replacement users to be sold.

Finally, let me say something that stems as much from belief and conviction as it does from all the figures and statistics with which I could bombard you. For over 15 years, I have watched the progress of the home appliance industry in America. I have seen it grow; I have watched it through its triumphs. I have sometimes called attention to the mistakes which it has made. And I can tell you flatly and without fear of contradiction that the gas range business is a great business—one you should be proud to be a part of—one worthy of the best that's in you—because you make and sell a product that women think well of.

REALITY IN ACCOUNTING

(Continued from page 26)

tenance of investment as does the straight-line method. Studies which have been made of balance sheets show that whereas the reserves for depreciation in public utility balance sheets tend to average about 9% or 10% of the value of the property, in industrial companies the average is something like 25% or 30%.

It would be possible to argue that both are right, and the argument could be sustained if it could be shown that the actual rates of depreciation and replacement are different in the two groups. There is, moreover, the possibility that policies as to repairs and maintenance differ, or that other conditions are different. But so wide a disparity creates the impression that either the industrial provisions are too much, or the utility provisions too little. I shall not attempt here to say which is the correct answer, but I venture one or two observations.

First, it is clear that the companies making the larger provisions, if they are also making net profits, are the better able to maintain their investments against all sorts of change. Second, utility companies should be careful to see to it that the pressures of public regulation do not lead them, even indirectly or unconsciously, to resort to retirement accounting merely as a means of seeking the line of least resistance. This may seem a strange thing to say in face of the fact that commissions in general have favored straight-line depreciation; but still more they have favored low rates, and it is this pressure that, one sometimes fears, may lead to the acceptance by utility companies of lower depreciation provisions than prudence would in the long run dictate. In so far as inadequate depreciation reserves are the result of low rates prescribed by regulatory authorities, it is only fair to investors that they be given the opportunity to build up their reserves in a transitional period of sufficient rates, and not by charges against surplus arbitrarily required.

The true answer can be found only by companies keeping an ever-watchful eye upon the situation, observing their own experience and comparing it with that of similar companies. And the reality of the matter is that a company, by its depreciation provisions and maintenance policy combined, either is or is not maintaining the integrity of its investment over the years. It is an important question for management to answer. Your accounting departments will help you to answer this and the other questions discussed in proportion as you require and expect intelligent performance from them.

Courtesy *Southern Union News.*

Domestic Silence

"Miss Alice ain't home," said the colored maid to a caller. "She's done gone down to de class."

"What class?" asked the caller.

"Miss gwine to be married, you know, an' she's taking lessons in domestic silence."

GAS AT HOTEL SHOW

(Continued from page 32)

guests and visitors. The exhibitors themselves represent a powerful buying group well worth keeping posted on our industry's activities. Accordingly, at the Exhibitors' Breakfast, held on Wednesday of exposition week, Eugene D. Milener, secretary, Industrial Gas Section, spoke to the 100 assembled exhibitors on the subject of "Getting the Most from Cooperative Exhibits."

Few advertisers realize the *extra* benefits obtainable from cooperative shows as over and against an equally large total of independent, separate displays. It was pointed out that cooperation in A. G. A.-sponsored combined exhibits at national expositions includes activity both before and after "show week." Cooperative advance promotion encourages gas men from all over the country to attend national shows which the gas industry enters so that the utilities can join hands with the equipment manufacturers in following up the sales "ice-breaking" which is the purpose of all trade show participation.

P. U. A. A. Meeting

THE annual Western conference of the Public Utilities Advertising Association will be held on January 12 and 13 at the Hotel Cosmopolitan, Denver, Colorado, according to an announcement by E. K. Hartzell, Bristol, Tennessee, president of the Association.

Frank R. Jamison, director of publicity and advertising, Public Service Company of Colorado, is in charge of arrangements, and details of the program have been placed with a committee under the chairmanship of Harold J. Rowe, Iowa Electric Light and Power Company, Cedar Rapids, Iowa.

A feature of the utility meeting will be a joint session with publishers and advertising representatives of the Colorado and Rocky Mountain area, according to Mr. Hartzell. On Saturday night, January 13, delegates will be guests of the Public Service Company of Colorado at a banquet.

Gas Sales Jump

INDICATIVE of improvement in industrial conditions in the East, sales of gas for industrial purposes by the Public Service Corporation of New Jersey increased 17.05 per cent in the ten months' period ending October 31, 1939, as compared with a year ago.

Sales of gas for building heating by Public Service during the same period increased 23.20 per cent over the previous year. Total gas sales of the company to customers increased 3.14 per cent in cubic feet and 1.37 per cent in revenue.

Campaign Boosts Sales of Gas Heaters

PROMOTION of a gas circulator heater for stores, offices and factories at an especially low price, begun September 15, resulted in sales of 667 units by the Consolidated Edison Co. of New York, Inc., in the first month and a half of the promotion. Sales of central space heating installations in the company's territory numbered 516 during October, compared with 388 in the same month the previous year. Sales of water heating equipment during that month amounted to 416 units compared with 368 in 1938.

Consolidated Edison also reports that about 3,700,000 cubic feet of gas will be used annually for space and water heating requirements of 12 stores in a new building in Long Island City.

Thrifty Scotch Get Rid of Municipal Plant

FROM far-away Scotland comes news of a failure in public ownership.

Several years ago, according to the *Scotland Daily Record and Mail*, the town of Airdrie established a municipal gas system with high hopes of substantial profits and lower taxes. But the plant now has a debt of $100,000 and needs $150,000 worth of new equipment. So the town council recently voted to negotiate with a private company to take over the property. The first benefit to the citizens will be a reduction in rates.

Postpone Celebration of Murdoch Centenary

ARRANGEMENTS in Scotland to commemorate the centenary of the death of William Murdoch, to be held in Glasgow last November 15, had to be canceled owing to the war emergency. Special addresses and radio programs arranged for the commemoration have been indefinitely postponed. In the meantime, interest in the Murdoch centenary is being widely stimulated in the British national press.

Report Discusses Coal Gasification

HIGH pressures—one of the newer and more powerful tools of the modern scientist—may someday, through research, be used on a large scale by the manufactured gas and coal industries of the country, to their mutual advantage. Such is the prediction made in Technical Report No. V, of Bituminous Coal Research, Inc., "Possibilities of Research in the Gasification of Coal," by C. A. Barnes, fuel engineer at Battelle Memorial Institute, Columbus, Ohio, which was recently published.

According to the report, statistics show that, despite the widespread distribution of natural gas in recent years, the present trend is towards an increased demand for manufactured gas. The expansion during the past four years has been in the house heating and commercial and industrial fields. It is estimated that the present potential market in the domestic and house heating field is 40 per cent greater than the amount being supplied.

Dr. Barnes states that that improved gasification processes, possibly employing high pressures to obtain a gas of high calorific value without the use of oil for enrichment, are of equal interest to the gas utility and the coal producer, and research on the subject merits their mutual support.

That the prediction made in the report is no "pipe dream" is evidenced by recent reports from England which state that "—results obtained indicate the possibility of gasifying at these high pressures a large proportion of what has been regarded as the fixed carbon of coal in the form of a gas rich in methane and of high calorific value."

Gas Oven as a Loud-Speaker

WHEN Donland Duncan of Waukegan, Ill. started to "talk" to other radio amateurs through the ether recently, Bernard Pakenham got mad at the interference and turned his receiver off, but Duncan's voice continued to come in plainly. It seemed to be coming from the kitchen stove, a gas repairman reported after an investigation. A loose connection in the gas range acted like a detector tube and the oven became a loudspeaker.

Personnel Service

SERVICES OFFERED

Engineer, thirteen years' experience including **design of gas equipment, burners and furnaces.** Formerly research associate to U. S. Bureau of Standards for A. G. A. Laboratories. Heavy experience in air-conditioning, combustion engineering, refrigeration and sales. Desires permanent connection with utility or manufacturer. Clean cut Anglo-Saxon. (37.) **1325**

Gas engineer-manager open for position. Experienced in coal and water gas operation, high and low pressure transmission and distribution, servicing, general operating problems and public relations; references. **1328.**

Position wanted by **engineer** with consulting engineer, public utility or equipment company. 25 years' experience in the manufacture and distribution of coal and water gas. Also in the designing and erection of gas plants. Thoroughly familiar with the most improved methods of manufacture and equipment. Interview can be arranged. **1329**

Position wanted with utility or manufacturer by **mechanical engineer,** 37, married. Experience: 14 years test, development, manufacturing gas ranges, space heaters, floor furnaces, water heaters at A. G. A. Testing Laboratory and with prominent manufacturer, also automotive plants. **1330.**

Mechanical and electrical engineering graduate, married, 40, with sixteen years' experience in **engineering sales** of power plant and water works equipment—five years as sales manager—thoroughly qualified in sales and application engineering. Specialized in industry analysis and power application. Will consider location anywhere in U. S. **1331.**

Services available for **management** gas utility. Any location. Thoroughly experienced in coke oven operation, manufacture, mixing and distribution of retort, producer, water and natural gas. Vast knowledge preparation and mixing coals for manufacture various grades coke and by-products. Particularly qualified to obtain highest efficiencies and economies. Personal interview. **1332.**

Gas engineer, superintendent or manager, experienced in construction, **operation** and **management** of gas and combined gas and electric utilities. Also experienced in appraisal and rate work. **1333.**

Graduate **chemist,** 26, seeks placement with a coke or iron works; familiar with intermittent type of oven, by-product recovery, and blast furnace techniques; experience includes analysis of coal, coke, light oils and more than one hundred thirty thousand tons of pig iron in lots two hundred tons. **1334.**

SERVICES OFFERED

Mechanical Engineer, experienced in sales engineering, research and development work. Familiar with **air conditioning** and **refrigeration** equipment of both electrical and gas types. Also experienced in preparing and analyzing reports and statistical data. **1335.**

Valuation and **rate engineer.** Sixteen years' experience in valuation of gas transmission and distribution companies. Experienced in preparing and presenting valuation and rate studies before courts and commissions. Now employed in key position on valuation of major pipe line and distribution company. Can furnish best of references. **1336.**

Three years **inventory** and **valuation** experience on gas distribution system; four years in telephone engineering department two of which years in the preparation of a plant inventory. Thoroughly experienced in preparation of continuing property records of public utilities as prescribed in the uniform system of accounts. (31) Married. **1337.**

Chemical Engineer—six years' experience in an operating gas company as **engineer** in **distribution** and **manufacturing.** Engineering and sales departments executive experience in refrigeration, air conditioning, and residence heating. Three years' experience in industrial heating and combustion problems. Desires executive connection in plant supervision, distribution supervision, sales. **1338.**

Position as new business manager, **gas sales promotion** manager, or merchandise sales manager, desired by technical graduate, thoroughly experienced in the promotion of gas and appliance sales for domestic industrial, commercial and house heating use, with 15 years' of experience and outstanding records in the public utility industry. **1339.**

Manufacturers' sales executive with broad experience. Utilities and distributors in East. Excellent record and reputation. Outstanding contacts. Desires change. Further details gladly given. **1340.**

POSITIONS OPEN

Opportunity for young man with an engineering degree, under 30, preferably with some experience in hotel and restaurant sales with utility or manufacturer to grow up with a public utility company as **special sales representative.** Duties include promotion of gas use by hotels, restaurants, architects, builders, etc.; preparation of cost estimates for purchase and maintenance of equipment; knowledge of competitive fuels and ability to compute and compare operating costs. **0341**

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